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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
Mitchell Bros. Company.
(INCORPORATED.)

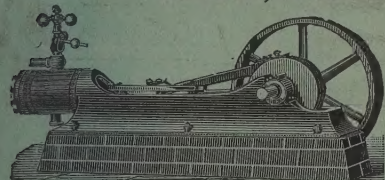
Vol. V.

CHICAGO, ILLINOIS, JULY 15, 1886.

No. 1.

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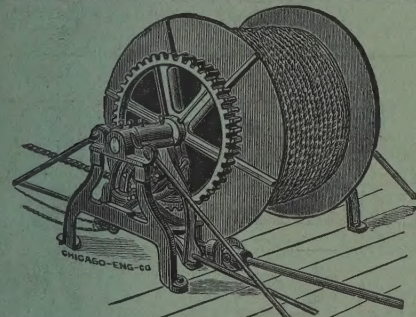


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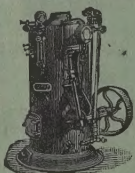
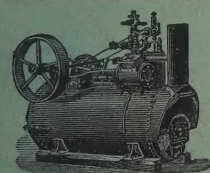
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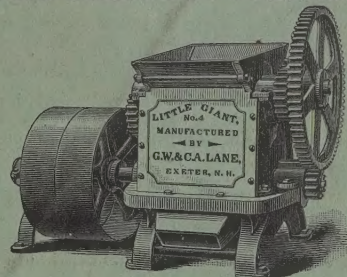
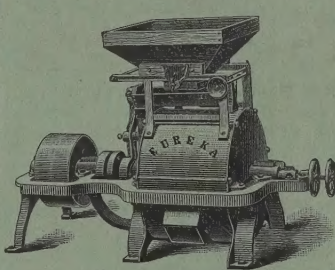
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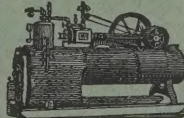
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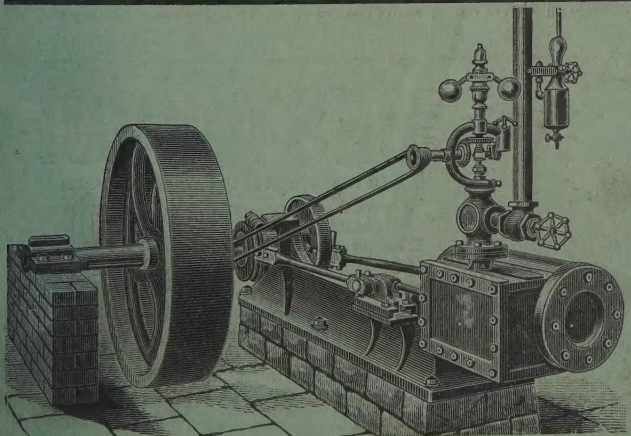
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OFFICE OF G. B. SHAW & Co.,
CHERRYVALE, KAN., March 9, 1885.

DEAR SIR:—In answer to your recent favor will say, that with the three elevators we are now operating, built in accordance with plans furnished by you, we are well pleased, and would have no hesitation in recommending you as a skilled and economical designer of Elevators. With the machines and machinery bought of Barnard & Leas Mfg. Co. we are also well pleased, as it is all first-class and satisfactory in every way.

Very truly yours, G. B. SHAW & Co.

A. C. SHERMAN, Grain Dealer,

ROSSVILLE, KAN., March 5, 1885.

DEAR SIR:—I desire to say, that by following plans in building my Elevator at St. Marys, Kan., furnished me by you, and placing my order for machinery with Barnard & Leas Mfg. Co., of Moline, Ill., for Wheat Cleaner, Corn Sheller, and Cleaner and Elevator Goods entire, I now have one of the best Elevators in the state. Everything works splendid and to my entire satisfaction.

Respectfully, A. C. SHERMAN.

OFFICE OF TUDOR, ELLIOTT & Co., Grain and Chop-

ped Feed, HOLTON, KAN., March 21, 1885.

DEAR SIR:—We like the plan of our Elevator very much, and do not think that for a building of the size of ours the plans could be improved upon. Everything is simple and handy, and very easily run. The machinery works fine, and has ever since we started, and the Sheller is the best we have ever seen. The Corn and Wheat Cleaners could not do any better work than they do. We are fully satisfied and pleased with everything, and

should we conclude to erect another Elevator at some other point, will consult you for a plan.

Yours very truly, TUDOR, ELLIOTT & Co.

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Grain and Flax Seed,

PLEASANTON, KAN., March 5, 1885.

DEAR SIR:—The Elevators you designed for us at Fontana, Kan., and Sprague, Mo., are giving entire satisfaction, and the machinery all does its work well. We consider your plan very convenient, substantial and economical.

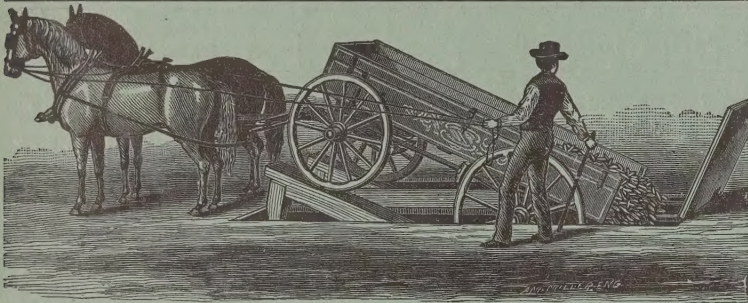
Yours very truly, B. F. BLAKER & Co.

BRINSON, HILL & Co., Grain Commission Mer-

chants, OTTAWA, KAN., April 2, 1885.

DEAR SIR:—Replying to your favor of recent date, we take pleasure in saying, our new elevator built here last season, on your plans and specifications, gives us highest possible satisfaction; and the machinery furnished by Barnard and Leas Mfg. Co. is first-class in every respect, and works to our entire satisfaction. We have, up to this date handled about 150,000 bushels of ear corn, and a large amount of other grain through our elevator, and with your complete outfit of machinery, etc., and have not been to a nickel's expense or had one minute's delay from any cause whatever, all of which we credit to your well-arranged plans, and good class of machinery furnished by your house. We can fully recommend and indorse your architecture and machinery, and you have liberty to refer to us, any time, any one contemplating building an elevator.

Very truly yours, BRINSON, HILL & CO.



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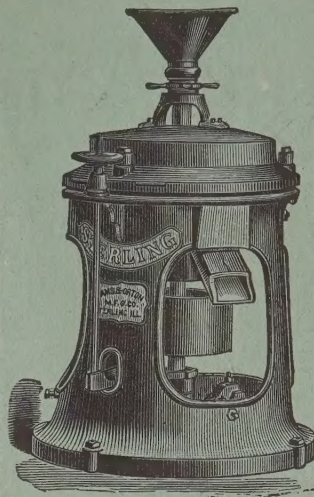
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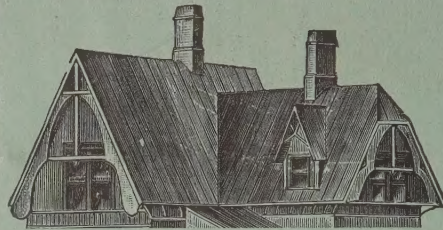
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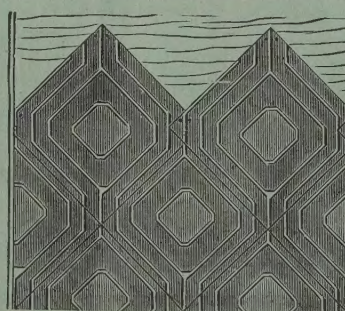
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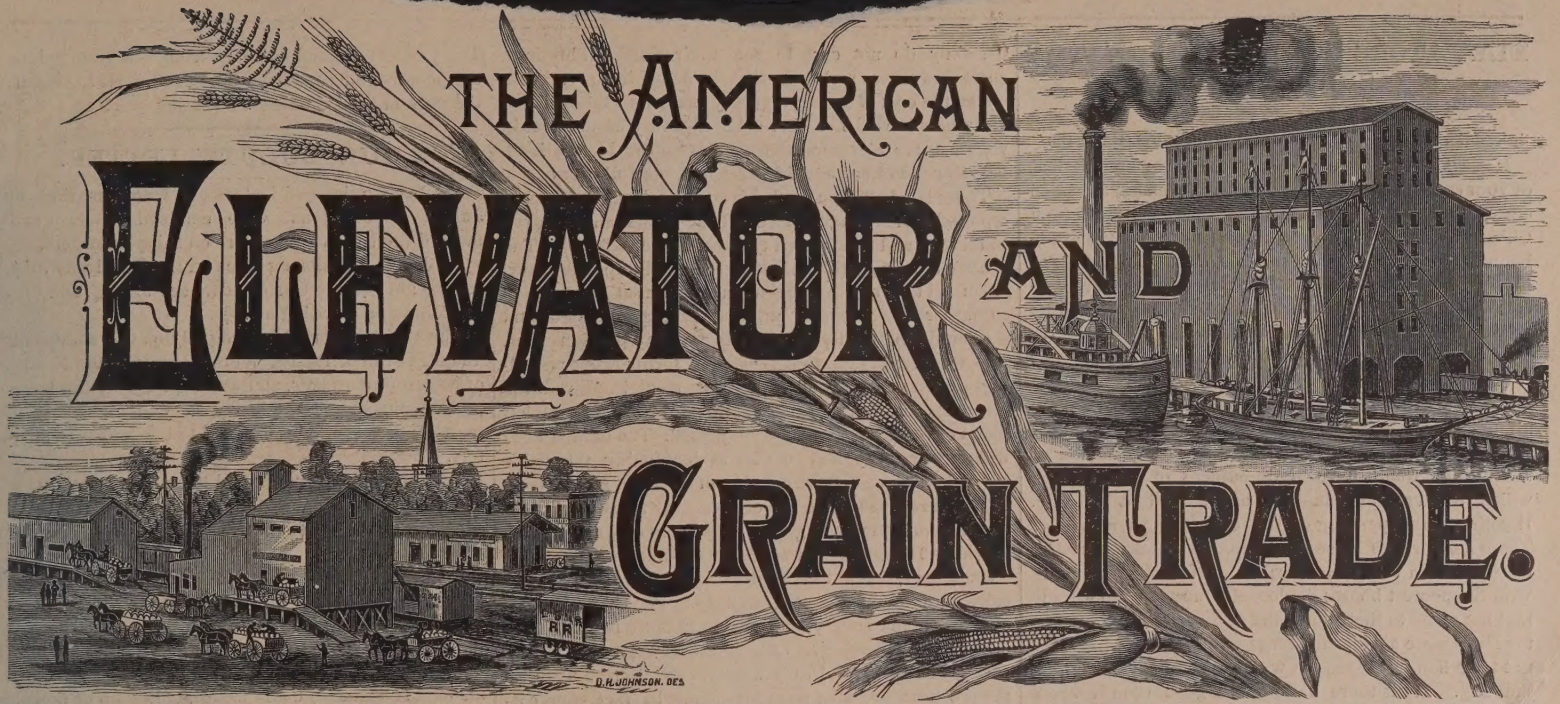
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CHICAGO, ILLINOIS, JULY 15, 1886.

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THE STANDARD FLAXSEED SEPARATOR.

On this page is given an illustration of a machine which will interest handlers of flaxseed, inasmuch as it claims to perform the highest possible grade of work on flaxseed, the perfect separation of which from mingled impurities is well understood to be no easy task. The machine is built by a practical millwright of experience who has named it "The Standard."

The machine in question is very simple in its operation and without complexity of parts. The flaxseed first goes over a double cylinder, one to take out straws, sticks, and the like, and the other to remove mustard and other foreign seeds. It next passes through a suction into a revolving cylinder which is covered at the head with perforated sheet metal, which will also take out mustard and other small seeds. Thence it will pass over wire cloth of two different meshes, thus making two grades of flaxseed, which, if desired, can be run together. As this machine does not depend on riddles and suction alone, it claims to be free from the trouble of clogging and running over, common in many machines built for the same purpose. The manufacturer is Mr. Fred Grotenrath, 593 Island Avenue, Milwaukee, Wis., whose card appears on another page, and who will answer all communications addressed him.

There is a statute in Dakota which imposes a fine on every farmer who does not destroy the Canada thistle, cockle, or other noxious weeds on his grounds. A similar law in every state of the Union would be a great benefit to this country.

It is said by New York journals that one-half the potatoes used in that city are grown outside of the United States. Leaving out the large quantities of this edible imported from Bermuda, Nova Scotia, Prince Edward's Island, and other sections of the Canadian Dominion, nearly every ocean steamer reaching New York from Ireland, England, Scotland, Wales and Germany brings a quota.

SELLING WHEAT AT THE ELEVATORS.

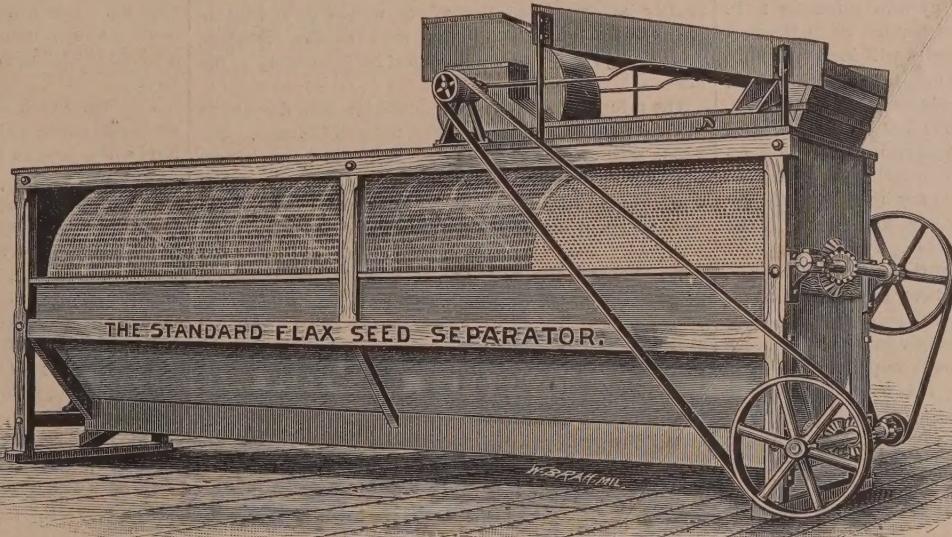
A large quantity of wheat is taken direct from the threshing machine to market. When properly threshed and cleaned this is, of course, the most economical plan, when it is intended to market the wheat as soon as possible after threshing. We can not handle wheat without more or less waste, besides increasing the expense. At present prices, in order to raise and market wheat so as to secure a profit, every

reason, to avoid waste in threshing by throwing the wheat over, it will often be found more profitable not to attempt to clean too thorough, but run through a good fan after threshing. What is taken out can then be used for feed, instead of being entirely wasted.

With a good large sheet spread out under the fan, there is very little need to waste in fanning wheat, and you can, in a very few minutes, gauge the speed and the wind on the fan so as to clean thoroughly and yet not waste. Wheat, with considerable chaff, straws or broken weed stalks, will always be docked in market.

The mills or elevators will be obliged to clean over, or rather the owners, knowing by experience that clean wheat will bring a much better price, that it will pay them to hire men and run the trashy wheat which they purchase from the farmers through a good fanning mill. If they do this, it is because they find it profitable, and if they can hire men to do this work profitably, the farmers can certainly realize a profit by cleaning before sending to market.

With present prices, it is very necessary to secure the highest price obtainable, in order to secure a profit; and to do this, the wheat must be clean and dry. The farmer can dry and clean his wheat fully as cheap as the



THE STANDARD FLAXSEED SEPARATOR.

means must be used to do the work as economically as possible.

Yet, to secure the best market price, the wheat must be in as good a condition as possible. Carelessness, in this respect, entails considerable loss. There are thousands of bushels of wheat sold every fall for which a much better price could have been realized had proper pains been taken to clean and put it in the condition to obtain it. With the wind in the right direction, the stacks properly arranged so that the machine can get the full benefit, and the machine properly managed, the wheat can be thoroughly cleaned. It requires careful, steady feeding, close attention to the riddles to see that they are kept clean and the proper gauge of wind on the fan, so as to properly clean. Unless care is taken, and especially if the wheat is not thoroughly dry, of blowing considerable wheat over in attempting to clean, as should be done before sending to market. For this

owner of the elevator, and if he finds it profitable to clean, the farmer certainly can do the same. Where any kind of small grain like wheat, oats, rye, barley or buckwheat, a good fanning mill will always be found profitable in cleaning grain for market and for seed.—*Racine Agriculturist.*

Chinch bugs, it is reported, have been destroying the wheat in Dakota county, Minn.

Our average crop of Indian corn ranges from 1,800,000,000 to 2,000,000,000 bushels. At 25 to 30 bushels to the acre the area of the cornfield is only 112,500 square miles, or less than 4 per cent. of the total area of the country. Our customary average is less than 30 bushels, but on the best land 50 bushels are commonly produced, and often 100. Corn may be reduced to pork at the ratio of about one bushel to ten pounds, including waste.

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ELEVATORS AND GRAIN IN THE SOUTHWEST.

Special Correspondence AMERICAN ELEVATOR AND GRAIN TRADE.

KANSAS CITY, Mo., July 10, 1886.—In the ambulations of your correspondent a few days ago he came across an energetic specimen of humanity who had come down from Chicago with an idea that there was room for the establishment of more elevators at this point. He had been here for a week, and notwithstanding that the thermometer was marking the 100's as assiduously as was in its power, he had as he declared taken in the situation. He went over his experience willingly for my benefit.

"I have looked in vain for what I expected to see—a first-class elevator," said he. "To me it appears as though all investments had been made on a wrong basis. Those who have put their money into this important branch of the milling trade have built edifices of a description which would not for a moment be tolerated at Chicago. Recollect I am speaking of the elevators as a whole. There are perhaps three elevators which are passable, but more than this there are not. Nevertheless, those with the poorest houses deplore the most the poor trade that has come to their doors the past season. Of course the Fates were against any large business; the wheat was not to be had in the section which is commanded by this industry. Yet if there had been a good crop it would be no source of wonderment to me if business had been poor. There are no inducements to outsiders to ship to this point. Even up at Chicago we have heard that there is a division among the members of the Board of Trade on the subject of mixing. There appear to be two cliques, the mixers and anti-mixers. Now at Chicago we do a plenty of this, but at the same time we exert ourselves to the utmost not to incur the displeasure of the Board of Trade commission men. We recognize that our bread and butter depend upon the manner that we suit them. Here it is different. I have heard elevator men declare that they did not care one cent what the commission men thought so long as these reports were kept from the country shipper. The short-sighted fellows do not seem to realize the fact that the practice, like Banquo's ghost, will not down. You can't hide anything that is crooked from the country men very long, even if you use the utmost secrecy with reference to it.

"Above all, any elevator run in a manner which is antagonistic to the interests of all parties will sooner or later go to the wall. Competition is too strong at the present stage of the game to allow any one who does not recognize the power of his customers to find out his methods, the much more so if they be of anything inclining toward's crookedness. Your elevator men here do not aim to be crooked, and nobody would say they were as the world would judge. But their methods are not of the best and will not tend to draw trade. I have seen order after order sent from the mills at this point to Chicago. Over and over again these millers have declared that they could not get anything from the elevators here that they could rely on, and as the supply in the country was small and hard to get at they were compelled to come to the northern city for supplies. This ought not to be so. There are not enough mills here to use the grain which should flow in even in an off year from the tributary states. The above reasons have brought me to the conclusion that some energetic man in perfect accord with the commission men and millers, who will make their interests a study, would succeed well at this point.

"One gentleman who is running one of the largest elevators in this city assured me that he was going to turn over a new leaf as soon as the new crop commenced to arrive. I do hope for the good of the trade he will persist in his undertaking. I doubt, however, if he will be able to do so. The majority seem to be against him. If he does, however, he will not regret it after having tested the change for a year or two."

Some of the readers of the AMERICAN ELEVATOR AND GRAIN TRADE may think that it is unwise to publish what an expert at the business thinks of the present policy, but if they will heed the word of warning they will discover the advice and criticism will pour a good deal of wealth into their pockets. They will find that the elevator men throughout the country will send in two bushels where at present they send one. They will be astonished to witness the demand among their own town millers for the wheat they have for sale or in their care. In a few words they will be brought to understand that the same methods used elsewhere to sustain and increase trade will prove the proper avenues to success. They

certainly do not care to see their Northern brethren come down here and teach them by example how to catch on, at the cost of losing a goodly portion of the business they now have. Let there be the very best system in vogue at the elevators here that is known in the land. Elevator men here should be leaders, not followers.

There is a better outlook for crops in Kansas than was reported a month ago. The wheat shows an improved condition and the quantity exceeds the estimate. The quality is very good, the berry being plump and heavy. About all the crop has been saved without loss. As to corn, there never was as large an acreage planted, and the condition is fully equal to that of any previous year. The weather is just what is needed for its proper ripening—warm and showery. Recent rains improved the prospects for oats, and there is no longer much doubt but that an average crop may be expected. The chinch bugs which were reported earlier as devastating the fields throughout the southern portion of Kansas have disappeared under the influence of drowning rains. In Dickinson county the average yield per acre of wheat is estimated at 24 bushels per acre. It is all harvested. Sedgewick county, one of the middle counties of the state, has more corn in than any other county. The corn fields almost cover the county, and it is said there is every prospect for the largest yield that has ever been had in any county of the state. In Chautauqua and Norton counties the prospects are also most brilliant. In fact your correspondent has not heard a single adverse report from any section of the state. This prospect of plenty in the yield has had the effect of causing a good many farmers to look ahead and so far as possible decide on the prospective prices. It seems to be universally conceded that these will be the lowest in the history of the West. The result will be that a good deal of it will be fed to cattle, and corn will never see the inside of the elevator. Already the husbandman is looking about for cattle and hogs to fatten on the yield. The latter class of animals are in particular request owing to the fact that the higher range of values in vogue at present has every appearance of continuing. According to the amount of corn fed it is said that the feeding of hogs brings fully 20 per cent. more cash to the farmer than cattle. This is much more the case when a lot of hogs are put on the field to follow the herds. It will readily be seen then that there will be no sudden increase in the visible supply of corn at the elevators, even though the crop is the largest in the history of the land.

The prices of wheat at this point have been downward the past month in sympathy with those of Chicago. No. 2 red, selling at 62 cents the first of last month, now brings 58 cents, and is slow sale even at this figure. No. 2 soft has declined from 67½ cents to 65 cents. The lowest price of the month was June 16, when 59 cents was paid. The highest had was only 68 cents. No. 3 red, contrary to the other grades, now brings a higher price than thirty days ago, going up from 40 cents to 43 cents. The reason of this can not be given. Corn has also had an upward tendency so far as No. 2 is concerned. Prices show an advance from 25¼ to 26 cents. White at the opening of the month under review sold at 28¾, and now brings 27½. No. 4 has gone up from 15½ to 17 cents during the same period. The market for all kinds of cereals has been the dullest noted for several years at this point, and elevators with a light supply have hardly paid expenses. At no time has there been any activity to the market.

The visible supply in local elevators at present is as follows: Wheat, 170,978 bushels; corn, 105,727 bushels; oats, 170 bushels; rye, 384 bushels; and barley, 721 bushels. This puts the total amount held by all elevators at 278,980 bushels. During the month the receipts have been as follows: Wheat, 49,032 bushels; corn, 133,496 bushels; oats, 1,797 bushels, and rye 660 bushels. Last year there were five times as much wheat, twice as much corn, six times as much oats, and eight times as much rye taken by elevators here during the corresponding time. Thus it is readily understood wherein the profits of the elevators have been materially cut down.

Millers here and throughout neighboring sections have not had an active time of it. There has at no time been the same activity as last year. With very few exceptions the mills have been contented to run on half time. Prices in sympathy with those on wheat have steadily declined. Closing prices are as follows: Fancy, per sack, \$1.80 to \$1.90; choice, \$1.55 to \$1.60; family, \$1.35 to \$1.40; XXX, \$1.15 to \$1.20; XX, \$1.00 to \$1.05; X, 90 to 95 cents; superfine, 80 to 85 cents; and fine, 70 to 75 cents.

The greatest demand has been from Southern points for the poorer grades, and the Fort Scott & Gulf has carried the bulk of the shipments.

OUR DULUTH LETTER.

We had a quiet and featureless wheat market up to July 2. Fluctuations were confined to a cent or two; most of the transactions were on shipping orders.

On July 1 the closing price on the Board was 78¼ for August; but on the Curb it advanced to 79¼, and opened the following morning at 79½.

The advance started principally on the statements of the McCormick Reaper Works' agents in the Northwest of bad crop prospects, and was kept up by the large export clearances and the heavy demand for wheat, there seeming to be a sudden anxiety to buy wheat in all quarters.

Bad crop reports continued to come in, and the market therefore continued to advance until it reached 85½ cents (an advance of 9c. in as many days), the highest point on July 8.

On Friday the early trading showed a large decline, mainly on account of the failure of Dwyer, the Chicago operator; during the balance of the day and all Saturday the market was as changeable as any scalper (no one else making any transactions, as the sudden advance checked all export business) could desire, going up or down, according to the tenor of the last crop report received. The sentiment here is growing in favor of higher prices, but it is based on the outcome of the crop, which is figured all the way from total destruction to a three-fourth crop.

Deliveries were not large on the 1st inst.; most of the wheat found its way into the shippers' hands.

David Dows Jr., & Co., New York and Chicago, have discontinued their branch house at this point. They will continue to do business here, but think they can work to better advantage by forming a connection with a good house.

A meeting of the creditors of the defunct grain firm, Mills & Yates, was held on the 23d ulto. The liabilities of the firm were some \$36,000, and the assets about \$11,000. These are all supplied to secured claims, leaving the unsecured liabilities at \$25,000 without any assets to even up. The firm expressed themselves as being very anxious to continue on in business, and they claimed that a friend is willing to loan them \$2,500 to begin business with.

They thereupon offered a dividend of 10 per cent. to settle all claims, which was of course refused. The creditors will accept no such terms, and no compromise will be effected.

Wright, Ray & Co., who failed some time ago, settled all claims by paying sixty cents on the dollar.

The North American Telegraph Co. have got down to business. Griffith, Marshall & Co. have a private wire to Minneapolis through this company.

Receipts of wheat for the month of June, 1,453,901 bushels, against 745,575 for the same month in 1885.

Shipments, 2,244,267; same month last year, 1,904,069. Stock in store July 5, 4,432,035 bushels.

Shipments of flour for June, 300,000 barrels; since opening of navigation, 650,000 barrels.

The Duluth Roller Mill Company has been incorporated with a paid in capital of \$100,000. Directors, John A. Davis, J. R. Howes, D. G. Cash, J. B. Howard and Alex. MacDougall.

Our Board have followed the example at Chicago by having only one session during the summer months, and opening at 10:30 Monday mornings.

Wheat closed to-day at 82½ bid for August.

Duluth, July 10, 1886.

PROBUS.

EXPORTS OF WHEAT AND CORN.

The following shows the exports of wheat and corn, including wheat in flour, from all American ports and Montreal from Sept. 1 to June 26, for the years named:

	Wheat.	Corn.
1885-6.....	75,708,000	55,494,000
1884-5.....	102,59,000	44,361,000
1883-4.....	87,787,000	31,001,000
1882-3.....	112,614,000	36,981,000
1881-2.....	101,130,000	25,327,000
1880-1.....	136,764,000	64,124,000
1879-80.....	140,316,000	80,316,000
1878-9.....	118,405,000	67,776,000

It takes 630,000 bushels of wheat to supply the mills of Minneapolis for one week.

LATE PATENTS.

Issued on June 15, 1886.

BAG FASTENER.—James L. McDonald, Steelton, Pa., assignor of one-half to James A. Galvin, same place. (No model.) No. 343,918. Filed Jan. 21, 1886.

CAR STARTER.—Herbert Kells, Astoria, N. Y. (No model.) No. 343,818. Filed Nov. 23, 1885.

DRIER.—Arthur Buel, New York, N. Y. (No model.) No. 343,755. Filed Sept. 26, 1885.

DRIER.—Max Hecknig, Dartmund, Prussia, Germany. (No model.) No. 343,813. Filed Oct. 20, 1885.

METHOD OF CLEANING GRAIN.—Benjamin D. Crocker, Walla Walla, Wash. Ter. (No model.) No. 343,624. Filed Jan. 29, 1886.

APPARATUS FOR CLEANING GRAIN.—Benjamin D. Crocker, Walla Walla, Wash. Ter. (No model.) No. 343,891. Filed Jan. 29, 1886.

GRAIN SEPARATOR.—Morgan Lavinger and Eli H. Anspaugh, Columbia City, Ind. (No model.) No. 343,822. Filed June 10, 1884.

GRAIN WEIGHING AND REGISTERING SCALE.—Wm. M. Perkins, La Fontaine, Ind. (No model.) No. 343,844. Filed Feb. 9, 1886.

AUTOMATIC GRAIN WEIGHING AND REGISTERING MACHINE.—Robert S. Gabbey, Rossville, Kan. (No model.) No. 343,763. Filed Aug. 25, 1885.

Issued on June 22, 1886.

BAG HOLDER.—Wm. J. Broker, Osakis, Minn. (No model.) No. 344,078. Filed Jan. 26, 1886.

CHAIN CONVEYOR.—Michael Garland, Bay City, Mich. (No model.) No. 344,178. Filed March 2, 1886.

GRAIN REGISTER.—Fred Stanton, Stillwater, Minn., assignor to E. S. Brown, receiver of the Northwestern Manufacturing and Car Company, same place. (No model.) No. 344,013. Filed July 16, 1885.

GRAIN SEPARATING MACHINE.—John Lucas, Hastings, Minn. (No model.) No. 343,999. Filed Aug. 31, 1885.

AUTOMATIC GRAIN WEIGHING APPARATUS.—John F. Milligan, St. Louis, Mo. (No model.) No. 344,192. Filed Dec. 23, 1885.

GRAIN WEIGHING APPARATUS.—Arthur E. Wade, Parkville, Ill. (No model.) No. 344,148. Filed Feb. 9, 1886.

Issued on June 29, 1886.

BAG HOLDER.—Cytus C. Hollingsworth and Frank Broyles, Knox, Va. (No model.) No. 344,738. Filed Feb. 20, 1886.

GEARING FOR OPERATING STRAW CUTTERS, CHOP-GRINDERS, AND CORN SHELLERS.—James W. Ewenhiser, Berne, Ind. (No model.) No. 344,363. Filed Dec. 5, 1885.

DEVICE FOR TRIMMING GRAIN.—Marquis F. Seeley, Fremont, Neb. (No model.) No. 344,602. Filed June 13, 1885.

AUTOMATIC GRAIN WEIGHER.—Miles K. Lewis and Francis S. Lewis, Hastings, Neb. (No model.) No. 344,663. Filed Aug. 20, 1885.

Issued on July 6, 1886.

AIR BLAST REGULATOR FOR FANNING MILLS, ETC.—Robert W. Kirkpatrick, Glenville, Minn. (No model.) No. 344,912. Filed March 8, 1886.

FEED GRINDER.—Martin L. Metzger and Albert Cooper, Harrisburg, Pa., assignors to William O. Hickok, same place. (No model.) No. 345,163. Filed May 11, 1885.

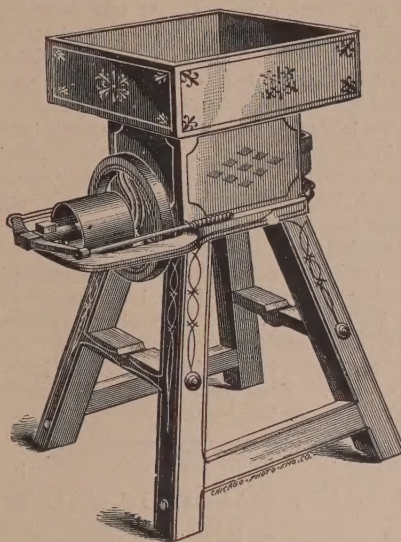
APPARATUS FOR THE MANUFACTURE OF MALT.—Charles Fey, Brooklyn, N. Y. (No model.) No. 345,128. Filed Feb. 11, 1886.

A bunch of red amber wheat was recently exhibited at the office of the Wilmington (Del.) *Republican* which measured in the clear six feet six inches in height, and which had not finished growing yet. This wheat had been grown on the farm of Anthony Higgins, in Red Lion Hundred, near the village of Delaware City, Del.

AMES BROS. IMPROVED DIAMOND FEED MILL.

The feed mill is becoming more and more a fixture in elevators and on stock farms, and among the numerous devices on the market we may mention as well known the Ames Bros.' Improved Diamond Feed Mill, an illustration of which is given in this column. This machine is adapted for use in elevators, grist mills, on stock farms, and, in short, wherever feed material is ground. It can be operated either by direct connection with tumbling rod or any ordinary horse power, or by belt from power, as the case may be. Our illustration shows one designed to be driven by belt. The mills are supplied either with right or left-hand burrs, and geared with different sizes of pinions to adapt them to the various speeds of the horse power in common use.

The mill is extremely simple in construction. The



revolving burr runs on a pivot center, and is therefore always self-adjusting and does not require to be faced up to the stationary one. The burrs are easily taken out and replaced, and any one with ordinary intelligence can attend to the few details of the machine. The revolving burr is governed by a strong, nicely-adjusted spring, which prevents breakage in case nails, stones or other hard substances should get into the material to be ground, a point of great advantage.

Two sizes and two styles of mills are made. The No. 1 mill has 6-inch burrs and the No. 2 mill 8-inch burrs. The No. 1 mill will grind from 10 to 25 bushels per hour with from two to six-horse power, and the No. 2 from 15 to 40 bushels per hour with from four to eight-horse power. Each pair of burrs will grind from 500 to 800 bushels of grain before needing replacing, a small matter, as each pair only costs seventy-five cents for a No. 1 mill, and one dollar for a No. 2 mill. If the grain is to be only coarsely ground or cracked, the burrs will, of course, grind much more. The mill has a perfect automatic feed which can be set to deliver grain to the mill with any desired flow, and which when once set adjusts itself in accordance with the speed of the mill.

The manufacturers claim for these mills strength, simplicity, durability, capacity, utility, adaptation to different kinds of powers to a degree unexcelled, and guarantee the mills will do all that is claimed for them. This mill is made by McLaughlin, Sheldon & Co., Owatonna, Minn., who will give inquirers all desired particulars.

Chicago elevators contained last Saturday evening 7,750,561 bushels of wheat, 2,176,050 bushels of corn, 263,934 bushels of oats, 12,428 bushels of rye, and 23,504 bushels of barley; total, 10,226,473 bushels of all kinds of grain, against 15,930,736 bushels a year ago. During the last week our stock increased 197,769 bushels, including an increase of 58,290 bushels of wheat and 95,126 bushels of corn. For the same date the secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 28,567,718 bushels of wheat, 9,180,865 bushels of corn, 2,204,967 bushels of oats, 234,928 bushels of rye and 230,463 bushels of barley. These figures are larger than the corresponding ones a week ago by 348,966 in wheat and 48,473 in corn. The visible supply of wheat for the corresponding week a year ago decreased 555,530 bushels.

GOVERNMENT CROP REPORTS.

The Government Crop Bulletin, of April 10, says: The acreage of corn has very slightly declined in the Middle states and in Maryland, Virginia and South Carolina, with some increase in other states of the South, which is largest west of the Mississippi. In the Ohio Valley the acreage is nearly the same as in 1885. West of the Mississippi the increase is heavy: In Kansas, 20 per cent.; Nebraska, 10; Dakota, 30. The total increase is 3½ per cent., or about 2,500,000 acres. Corn is late on the Atlantic coast, from wet weather, cool nights and slow germination. In many situations the seed rotted and replanting became necessary. Instances are reported of planting three times. Yet there is generally a fair stand; the crop growing and healthy, and with seasonable July weather will make a full yield. It has suffered quite as much on the gulf coast, where wet areas are still more unpromising. The red lands generally bear a vigorous growth, while in the gray soils and bottoms the plants are yellowing and spindling. Some of the areas have already been abandoned. Some parts of Texas have been dry, but abundant recent rains will suffice for a good crop in the eastern and central counties. Arkansas shows high condition, but Tennessee reports injury from low temperature and excessive rain. The great corn belt of the West reports medium to high condition, growing better from Ohio to Kansas. The Missouri Valley averages better than the Ohio River and lake region. There is a full stand in Missouri, vigorous and even growth, and ten days earlier than last year. The Kansas returns are equally favorable. Insect injuries have nowhere been serious. The chinch bug is now threatening some localities in the West. The general average is 95 against 94 last year, and 96 in 1884. The averages of the following states are: New York, 92; Pennsylvania, 88; Virginia, 93; Georgia, 92; Florida, 99; Texas, 82; Kentucky, 91; Ohio, 93; Indiana, 95; Michigan, 96; Illinois, 97; Missouri, 101; Kansas, 102; Nebraska, 95; Iowa, 99.

The condition of winter wheat is reported for the first of July in northern districts not harvested, and in Southern states, as it appeared at the time of the harvest. The average has declined from 92.7 to 91.2. New York reports a decline of four points; Pennsylvania, five; Kentucky, two; Michigan, six; Missouri, one; Kansas, three; Ohio and Indiana remain as in June, and Illinois gains one point.

The condition of spring wheat has declined from 98 in June to 83 in consequence of high temperature, drying winds, and lack of rain. In the principal states the decline has been: Wisconsin, from 97 to 75; Minnesota, 99 to 78; Iowa, 100 to 90; Nebraska, 97 to 83, and Dakota from 99 to 85.

The condition of oats averages 89, a decline of seven points.

Rye maintains its position, averaging 95. The average of barley is 90.

About 60,000 square miles are all that are required or are now under cultivation in wheat. At only 13 bushels to the acre this little patch, constituting but two per cent. of our total area, would yield 500,000,000 bushels of wheat. This quantity, after setting aside enough for seed, would supply 80,000,000 people with their customary average of one barrel of flour per year.

The Philadelphia *Record* reports a probable scarcity of broom-corn in the near future. Last year's crop, which was not very large, is nearly exhausted, and that remaining from the previous year was long since disposed of. The principal sources of supply are Illinois, Kansas and Nebraska, where large farms are devoted to the cultivation of broom-corn. Chicago is the largest market and center of distribution, while Philadelphia has the largest number of broom factories, and is consequently the largest consumer. The stock on hand at Chicago amounts at present to 1,700 tons, about 1,400 of which are held by four of the ten dealers in that city. In Philadelphia there are not over 600 tons in the hands of the five dealers who handle the article. It is estimated that the stock now on hand would be sufficient to supply the demand for but about six weeks of ordinarily good grade. The outlook for the new crop, which will not come in until October, is very poor, owing to the late heavy rains and cold weather. Broom-corn seed which sold last year at \$3 per bushel, now brings \$10, and the supply, even at the latter price, is said to be very limited.



M. F. Seeley, Fremont, Neb., has patented a device for trimming grain.

The Frost Manufacturing Co., Galesburg, Ill., are licensed to sell dumps under the patents controlled by J. M. Harper.

The Barnard & Leas Mfg. Co., Moline, Ill., are now supplying Swickard and Wells Dumps and Dump Irons, under license from J. M. Harper.

The Williams & Orton Mfg. Co., of Sterling, Ill., is in receipt of a large number of orders from St. Louis, Chicago, and other places, for Charter's Gas Engines.

Barnett & Record, builders and furnishers of round and square elevators, have removed their office from 315 Hennepin Ave., to Room 29, Corn Exchange, Minneapolis.

Messrs. Edward P. Allis & Co. request us to state that one, C. C. Hadden, who is traveling in Michigan, Ohio and Indiana, representing himself as their agent, is without any authority from them for making such representations, and is not now and never has been employed by them in any capacity whatever. Messrs. Allis & Co. warn millers to place no confidence in him on account of his claiming to be in their employ.

Geo. J. Fritz, of the Central Iron Works, has added to his plant a 600-pound Morgan & Williams steam hammer, which is working very successfully. With this decidedly useful tool he can do heavy forging; and with other additions he finds his facilities complete and himself in a position to compete with "all comers," both in the matter of price and promptness. In his department for corrugating and regrinding millers' rolls there is active state of work every day, although he has the capacity to do six rolls a day now.

The Morse Engineering Co., Kansas City, Mo., report several shipments of steam power outfits for the past week, among which are a 40-horse power boiler to Caldwell Coal Co., Hamilton, Kan.; 25-horse power Atlas Engine and boiler to Smith, Prince & Co., Jamestown, Kan.; 20-horse power Atlas Engine and boiler to Charters & Miller, Severance, Kan.; 35-horse power Atlas Automatic to H. White, Rosier, Mo., and they have contracts on their books for early shipment outfits to Lynn Water Works, Kan.; Moore & Co., Wellington, Kan., and Mokaska Mfg. Co., St. Joseph, Mo. Mr. Morse says the Atlas improved balanced automatic engine makes friends wherever it is used and is found to meet the requirements for an economical, moderate-priced engine.

In regard to "Perfect Tin Plates" the *Northwestern Architect and Improvement Record* says: "The claims made by a manufacturer or dealer for his wares, whether set forth in a circular, a catalogue or an advertisement in the public print, should be made with the same degree of honor and regard for the truth as when made direct to the purchaser whose redress at law for misrepresentation or exaggeration in the latter case is unmistakable. Honorable firms will so deal, although the custom of grossly misrepresenting one's goods in advertisements has placed them somewhat at a temporary disadvantage, and it is therefore with pleasure that we record the undeniable substantiation of the claim often set forth in our columns by Messrs. Merchant & Co., of Philadelphia, that their 'Gilbertson's Old Method' tin plates are the best in the market. Some weeks ago the United States advertised for bids for tin plates for roofing the White House. The specifications were specifically minute that only the best material might be obtained, and a precautionary article was added warning 'parties who imagine any other class will be received' not to bid. The test was made by an army engineer who is an expert in making such examinations of building and other material, and the test covered every point essentially possessed by a perfect plate, such as weight, durability, uniformity as to imperfections and irregularities, thickness and quality of coating, etc., etc. The plates offered by Messrs. Merchant & Co. were found to possess all the points of a perfect roofing tin and were adopted by the government. The result of this competition and the fact that each of the 'Gilbertson's Old Method' plates is stamped with the name of the brand and the thickness (IC or IX) leave architects and builders

no longer in doubt as to what the best is demanded, as it always should be. If architects would be careful to specify the thickness as well as the brand, they would always be sure of getting just what is wanted as well as what is ordered."

A correspondent of the *Pittsburgh Commercial Gazette* writing from Canton, Ohio, says: "The iron-roofing manufactured by Mr. T. C. Snyder in this city has aided very materially in making the name of Canton famous, as it is sold in every state and territory in the Union, besides being exported to other lands. Mr. Snyder's leading article in roofing is the 'H. W. Smith patent,' which is proof against fire, wind and water, has the finest joint in use, and can be used on any ordinary roof. He also makes corrugated roofing, siding, ceiling, etc., beaded siding, ceiling, etc., crimped-edge iron roofing and siding, ridge caps and fire-proof doors and shutters; and he deals extensively in slip joints, eave-troughs, conductors, pipes, etc. At this writing he is commencing the manufacture of C. A. Smith's patent adjustable slip-joint stove-pipe, which, when packed, is telescoped so that twenty-five joints will take no more space than one ordinarily requires. The joints, too, are all uniform in size. In addition to this specialty, he will begin the manufacture of C. A. Smith's patent inside iron car-roofing, which will doubtlessly meet with the favor of all car-builders. Mr. Snyder is, as well, the sole owner and manufacturer of Davis' portable steam drilling machine for drilling wells 500, 1,000 and 1,500 feet deep; and one of the features of this machine is its steam boring attachment. His office is located at No. 32 West Eighth street, while his works are stationed at No. 233 Tuscarawas street. His business has been established nine years, but has been conducted in Canton only six years. From 1880 he was a member of the Ohio Legislature for four years."

[FOR THE AMERICAN ELEVATOR AND GRAIN TRADE.]

THE GRAIN TRADE OF THE FUTURE.

COSMIC COMMERCE AND TRANSPORTATION. NO. II.

BY W. T. STACKPOLE, FAIRBURY, ILL.

In your journal for June we endeavored to condense some great and vital facts, that true statesmen, people and merchants can no longer safely disregard or ignore.

Their right amplification would fill volumes. But yet we must continue to condense. None can deny that Europe has been a vast gainer by the Suez Canal. By it European and Asian ports have been practically brought nearer to each other than before its construction by an average of fully ten thousand miles. Thus in Europe (and also in Asia) whatever they had to export would become more valuable, and whatever each imported would become cheaper. This is the natural and almost invariable tendency of cheapened transportation. It is the rule, proved by all commerce and experience, and not changed by apparent or real exceptions, or abrogated by peculiar or special conditions. Beyond any doubt true and beneficent commerce is thus aided and benefited, and this in turn benefits humanity. In this hemisphere corresponding benefits can only be won by the help of the Darien Canal. That may be set down as an axiom. It is not a mere theory or an idea. It is a great, a vital and a pregnant truth. It is fixed in nature by omnipotent power, and man can not change it.

The vagaries and theories that have now lasted three hundred years as to that isthmus, may be prolonged for an indefinite period. Inferior works may be thrust forward, by evil or misguided influences, to amuse or occupy the country, or to consume time, effort and money. But nothing within the power of man can meet the great requirements of the world's advance, but the *great sea level canal*, so bravely begun and so well advanced at Darien.

Vain and empty will be all expectation of a right revival and upbuilding of our ocean navigation, maritime power, and a suitable extension of our foreign commerce, if De Lesseps and his friends are delayed or defeated. It is not necessary to analyze who or what are the opposing influences. The cost will go beyond the first estimates, of course.

But this is almost always the case with all great and difficult works. And as this is the *greatest work in the history of the world*, it would indeed be strange if its cost when completed did not go far beyond the estimates.

But there are no difficulties that are insurmountable. And there are none but can be surmounted with benefit to its builders, to the world at large and to our country. Hence every motive of interest, of honor and of duty, should prompt us to aid. And we should aid when aid is needed. And it is needed now.

And never in all our country's history was there a time when our ocean navigation, maritime power and foreign commerce so greatly needed the help—which nothing else but the opening of this great gate can give—as this present time. And in the near future the need will increase. And as year after year rolls away it can only become greater and greater. A single glance at a map of the world will prove this to any educated and intelligent mind. For now we are compelled to depend chiefly upon England and Europe for a market for most of our surplus of almost every article of large exportation. From Chicago, St. Louis and all the center of the great basin of the Mississippi, we can only reach the Pacific Ocean by going first to and through the Atlantic, and so around Cape Horn, unless we go *two thousand miles overland by railway*. This will do very well for valuable freights, but it will never do for cheap and bulky articles. Take for example corn, the most important grain crop of our country. It will rarely if ever bear the great cost of overland transportation such a great distance. But in all the various countries to which that great ocean is the highway, and on its islands, and around its vastly extended shores, little corn is produced.

The great central trunk of our inland navigation, transportation and commerce is, by nature, the line of Lake Michigan, the Illinois & Michigan Canal, and the Illinois and Mississippi Rivers. The work required of man to suitably open it is comparatively light. With the Darien Canal completed and this line opened, it would not be long until in periods of scarcity, and even in times of plenty, one-half of the whole human race would begin to use more or less American corn, or some of the articles of food made from it. The safe, easy and cheap connection of the navigation of the great lake and Mississippi systems, with the Pacific, will open a new and great chapter in the history of our country and of mankind. And this not only in the grain trade, but in all beneficent, just and peaceful commerce, and in all human advancement in every good sense. Its benefits would open new fields for all human industry and all just enterprise, and would be felt in every fibre of all our country's affairs. And the vast and almost unexplored interior of Asia would soon be opened by an American-built trans-Pacific railway, from the Sea of Japan to the Caspian Sea, connecting there with railway lines through Russia and Europe, and with lines of navigation both to the Baltic and the Mediterranean, and so completing and connecting great belts of steam transportation and travel around the world through the heart of the temperate zone. This great Trans-Pacific Railroad project I presented in the *Boston Post* in July last, and its practicability and utility are beyond question. So too its benefits are beyond computation. It would be vast in extent—about once and a half the distance from New York to San Francisco, but caravans would come to its stations, at times, from an area of full six millions of square miles, or in other words from a region twice the size of the whole United States. If honestly built and rightly managed, it would have plenty of business, and that in every good sense. And it would pay in every good sense. And it would aid all our American Pacific railroads, including the Canadian. It would aid all commerce and all lines of transportation and travel in all our country and in Europe.

And to build it steel rails from any and all the American mills could be cheaply freighted to the Sea of Japan, when once the Darien and Illinois Canals were completed. They are not only the keys to our ocean and inland navigation, but also to our greatest granary. The gunny bags which for more than half a century have come from India to be used in our country, would then, in times of famine there, go back filled with good American corn.

And with the great railway the elevated region of Central Asia, where never one ear of corn can be raised, would soon learn its use. Only forty years have passed since the exportation of this cereal to Europe began, and none can set bounds to its use throughout the world if once these lines are opened. And in every way the sooner this is done the better. Our business is not to yield to plutocrats, to atheism, to avarice or to anarchists, but to advance on true and Christian lines.

THE HENNEPIN CANAL.

[Abstract of the Speech of Hon. Shelby M. Cullom in the Senate.]

The construction of the Hennepin Canal and the enlargement of the Illinois and Michigan Canal, thereby forming a free waterway from the Mississippi River to Lake Michigan by the most practicable connection, is in my judgment the most important work of internal improvement now pressing upon Congress for consideration. No other public work which the government is asked to undertake promises greater material benefits to the country in proportion to the expenditure required. I may be charged with exhibiting more zeal on behalf of this project than of some others because the entire length of the proposed canal would be within the borders of the state which I have the honor in part to represent. While I may have given more attention to the subject on that account, the fact that the canal would be wholly within the state of Illinois is not my reason for favoring with great earnestness its construction by the General Government. The demand for this improvement, as I shall hope to show, does not come from Illinois alone, nor would the canal benefit that state alone, or any more than it would other Western and North-western states. Illinois does not need this waterway as much as does the great region lying west of the Mississippi River.

The line of the canal runs through the Northwestern corner of the state, and of the 55,414 square miles included within the borders of Illinois not more than one-fifteenth part would be directly tributary to the canal if built, because the products of most of the state would have to be carried as far to reach the canal as they would to reach Chicago. Illinois does not come here as a suppliant asking the bounty of the government for its own advantage. Illinois, with more miles of railroad than any other state in the Union, with a free waterway from its metropolis to the seaboard, with the Father of Waters washing the entire length of its western borders and connecting them with the Gulf, with the Ohio River on the south, and with direct connection with the great railroad systems of the East, South, and West, is not suffering from the lack of facilities for transportation, and will continue to maintain its commercial supremacy in the future as in the past, whether this work of improvement is undertaken by the government or not.

No, Mr. President, I do not advocate this improvement simply because it would be of advantage to Illinois, but on broader grounds and for the general welfare. He who declines to look beyond the boundaries of his own state in the discharge of his own duties as a legislator here fails to comprehend the full scope of the obligations resting upon him. I hope to show before I sit down that the proposed improvement is one of National importance, and would prove to be of great value to the commerce of the whole American people. If I do so I hope that Senators will vote the proposed appropriation and let the work be begun.

What is the exact thing that is asked?

1. The construction of a canal commencing at the Mississippi River, at or near Rock Island, and running to the Illinois River at or near the town of Hennepin.

2. The acceptance by Congress of the grant already made by the state of Illinois of the Illinois and Michigan Canal, and the enlargement of the latter by the National Government to make its proportions correspond with those of the proposed Hennepin Canal.

The two propositions are intimately connected. They are indeed component parts of the one proposition that the government shall undertake to connect the Mississippi River and its tributaries with the great lakes by canal, thereby opening up a great water route that would become available for the cheap transportation of the more bulky products of the West and Northwest to the Eastern markets and to the seaboard for export, and in the distribution of the merchandise and manufactured products of the East among the consumers of the West and Northwest. That such a project is of national importance will not, I think, be seriously questioned, and that the most feasible and economical method of carrying it into execution is by the construction of the Hennepin Canal and the enlargement of the Illinois and Michigan Canal must, I think, be conceded by those who will carefully and impartially investigate the subject.

The river and harbor act of 1882 directed a survey to be made for a canal from a point on the Illinois River at or near Hennepin by the most practicable route to the Mississippi River at or above Rock Island, to be not less

than seven feet in depth of water, and not less than seven feet in depth of water, and with capacity for vessels at least 280 tons' burden. The act also provided for a survey of the Illinois and Michigan Canal, and for estimates of the cost of enlarging it to the dimensions of the proposed Hennepin Canal. These surveys and estimates were made and transmitted by the President to the last Congress at its first session. (Senate Executive Document No. 38.) A supplemental survey has since been made and transmitted to Congress the present session. (House Executive Document No. 117.) Reference is made to these surveys and reports for detailed information as to the route, practicability, and cost of this improvement.

None of the engineers engaged in these surveys raise any question or express any doubts in their reports as to the practicability of constructing the proposed waterway, and Major W. H. H. Benyuard, of the engineer corps, who has charge of the surveys, says:

"The surveys demonstrate that a perfectly feasible route exists for a canal from the Illinois River, near Hennepin, to the Mississippi River, at or above Rock Island."

The dimensions of the canal as agreed upon by the engineers, and on the basis of which the estimates were made, provide for a width of 80 feet at the surface and a depth of 7 feet of water, with locks 170 feet long and 30 feet wide, which would give a capacity sufficient, at the most unfavorable stage of the main river, for the passage of barges of 300 tons, although with deep water such barges could, with the box-top, carry 600 tons.

To make the dimensions of the Illinois and Michigan Canal correspond with the size of the proposed Hennepin Canal would require an enlargement of 20 feet in width, an increased depth of 1 foot, and the adding of 60 feet to the length and of 12 feet to width of locks, no change in the number or location of the locks being necessary.

The estimated cost of this enlargement is \$3,293,919.15, which would increase the size of the canal about 25 per cent. The present canal offered to the United States is 96 miles long, and with the Illinois River has extended water communication from Lake Michigan two-thirds of the distance to the Mississippi.

The length of the proposed Hennepin Canal is 74.5 miles by one of the routes surveyed to Rock Island, 77 miles by the other. Six routes in all have been surveyed, which follow different lines at the western end, and the estimated cost of each is as follows:

Rock Island Route, via Green River.....	\$6,709,536
Rock Island Route, via Penney's Slough and Rock River.....	6,551,052
Watertown Route, via Green River.....	7,307,616
Watertown Route, via Penney's Slough.....	6,306,532
Marais d'Osier Route.....	5,811,367

The difference in cost between the most northern and the Rock Island route via Penney's Slough, is \$542,685, and between the Northern route and the other Rock Island route is \$698,169. The difference in cost between the Penney's Slough Watertown route and the two Rock Island routes is very slight. General Newton, the chief of engineers, in view of the commercial importance of the cities of Rock Island, Davenport, and Moline, all close together, favors a route having its terminus at Rock Island, and I am of the opinion that if the canal is built it should make that city its western terminus, as is proposed in the amendment reported by the committee.

The states and territories lying in the vast expanse of the Upper Mississippi and Missouri River Valleys produce more than one-third of the food supplies necessary for the general consumption of the nation, and they are as well consumers of the products of other sections of the Union to the extent of the purchasing capacity of our own surplus products. The great markets are reached with more difficulty and at greater expense from this productive region than from any other portion of our country, and hence it is that the 13,000,000 people inhabiting this fertile domain bear a heavier burden in the shape of transportation charges than the remainder of our population, because of the long distances and expensive routes over which their products and purchases are necessarily carried to and from the Eastern States and Europe. Whatever improvements can be made that will reduce the cost of carriage will tend to reduce the cost to consumers everywhere of one-third of our entire food supply. Even should the entire saving go only into the pockets of the producers of this great empire, and add only to their wealth, the General Government would be justified in making liberal expenditures for their benefit. But it must be plain that the millions thus saved would be expended in making purchases of the products of other sections, which would reap like profits from

the increased demand for their products and the reduced cost of their distribution. Therefore, in either point of view it is clear that whatever saving can be effected in the transportation tax will prove materially advantageous to West and East alike, and will add to the wealth and prosperity of the entire Union.

We are all familiar with the marvelous development and unexcelled resources of this great productive area, which is capable of furnishing the food supplies of the continent. Its productive capacity seems almost unlimited; but in consequence of the recently increased and more successful foreign competition, a point has been reached where it is a question whether this vast domain shall continue to prosper unless it can be relieved of some portion of the onerous burden now imposed upon it for transportation. The numerous lines of railway constructed through this territory have failed to relieve this burden upon the staple products of the people to a sufficient extent to enable them to compete successfully with other countries and other sections of the United States, and they are therefore compelled to look to the development of the waterways with which nature has bountifully supplied them as the only available means of relief. They have 7,000 miles of rivers which are or can be made navigable, and 1,000 miles of lake coast, and they ask that these natural highways be improved and connected, not only for their own relief but for the benefit of the whole people; not only to increase the returns from their own labor, but their capacity to purchase the fruits of the labor of others; not only to reduce the cost of food in all parts of the Union, but to increase the earnings of the wage-worker and the profits of the manufacturers everywhere by increasing the demand for the products of every industry.

The purpose in constructing the Hennepin Canal is to extend the beneficial influence of the most effective regulation known over a vast expanse of the most productive territory of the United States by connecting the great lakes and the Mississippi, the cheapest and most practicable method that has been suggested. This canal could be, and would be, used by an immense traffic, but its regulative influence would affect an immensely greater traffic than could or would seek its line. It is estimated that between St. Paul and St. Louis 12,000,000 tons of freight annually cross the Mississippi, all of which would be affected by providing water communication between the river and the lakes; and a small saving in the freight charges on these shipments would equal every year the entire cost of this proposed improvement.

The vast empire lying between the Upper Mississippi and Missouri River Valleys, comprising the states of Minnesota, Wisconsin, Iowa, Illinois, Missouri, Kansas, and Nebraska, and the territories of Dakota and Montana, contains one-fourth of the area of the United States, not including Alaska, and has a population of at least 13,000,000, or nearly one-fourth that of the United States. The wonderful productive capacity of this territory is indicated by the following statement, compiled by Colonel P. B. Walker, of the Missouri River Commission, showing the extent of its productions last year, in spite of the heavy charges for transportation with which it is burdened, and the low prices prevailing:

ARTICLES.	Quantity.	Value.
Wheat, bu.....	839,551,000	\$310,000,000
Corn, bu.....	1,049,374,000	524,687,000
Oats, bu.....	349,435,000	37,358,000
Barley, bu.....	19,437,974	12,534,663
Rye, bu.....	10,674,852	5,337,432
Buckwheat, bu.....	966,372	493,136
Hay, tons.....	19,099,078	133,693,046
Wool, lbs.....	38,610,721	4,633,286
Horses, number.....	5,895,765	589,576,500
Cattle, number.....	15,792,042	432,201,969
Hogs, number.....	26,032,487	208,419,808
Sheep, number.....	7,024,720	21,074,160
Gold.....	.....	1,104,300
Silver.....	.....	23,370,000
Lumber, feet.....	5,175,000,000	60,000,000
Total.....	.....	\$2,409,469,000

The natural outlet for a large proportion of these products is through the great lakes to the East, the trend and tendency of this commerce being eastward. The traffic now carried on upon the Upper Mississippi River and its tributaries is much more extensive than is commonly supposed, as persistent efforts are made presumably in the railroad interests to create the impression that the river has virtually gone out of use.

Between the mouth of the Chippewa and St. Louis there are eighty mills on the main river, with an annual day-sawing capacity of 800,000,000 feet of lumber, employing some sixteen thousand men, and representing about \$20,000,000 of capital. On the Upper Mississippi

and its tributaries, the St. Croix, Chippewa, Wisconsin, and Black, there are about two hundred mills engaged in the manufacture of lumber, the greater part of their product being floated into the Mississippi.

The statement of the traffic that has passed through the Des Moines Rapids Canal since it was opened in 1877 to June 30, 1884, shows that it included 6,059 steamboats and 3,323 barges, 59,079 passengers, 368,572 tons of merchandise, 3,263,189 bushels of grain, 219,697,812 feet of lumber, 47,175,134 feet of logs, 82,838,561 lath, and 95,604,150 shingles.

In 1883 the number of steamboats, barges, and rafts passing the bridges over the Mississippi at the points named was as follows:

Bridge at—	Steamboats.	Barges.	Rafts.
Winona.....	4,898	898	1,352
La Crosse.....	4,216	509	1,663
Dubuque.....	3,585	867	1,423
Sabula.....	2,454	594	2,083
Clinton.....	3,006	592	499
Rock Island.....	2,561	142	972
Burlington.....	1,943	291	379
Keokuk.....	1,856	400	287

In the steamboat districts, extending from St. Louis to Sioux City, on the Missouri, and to St. Paul on the Mississippi, there are employed more than 300 steamboats, with an aggregate tonnage of 65,000, as against 122 in 1860, and the reports show that more than three and a quarter million passengers were carried on those steamboats last year, notwithstanding the popular belief that, so far as passenger travel is concerned, the great river has gone into what the Executive would call a state of "innocuous desuetude."

These figures, though incomplete, suggest almost unlimited possibilities in the way of cheap water carriage throughout the Northwest when its natural highways have been properly improved and their free navigation secured. Let us now glance at the commerce of the great lakes which the Hennepin Canal would connect with this traffic on the Mississippi and its tributaries. In 1885 nearly 31,000,000 tons of freight passed through the Sault Ste. Marie Canal during the short season of navigation. Although the number of miles of railway leading into Chicago from the West is 23,401 by main lines and 47,931 including branches, the trade of that city is by no means confined to shipments by rail. The reports of the Treasury Department show that during the year ending June 30, 1885, the number of vessels, foreign and coastwise, that arrived and cleared from the principal ports of the United States and from Chicago was as follows:

Ports.	Arrived.	Cleared.	Total.
New York.....	7,793	8,470	16,268
Boston.....	3,190	3,230	6,420
Baltimore.....	2,204	2,480	4,684
Philadelphia.....	1,991	2,295	4,286
San Francisco.....	1,035	1,268	2,303
New Orleans.....	1,034	998	2,032
Portland and Falmouth.....	704	711	1,415
Total.....	17,993	19,453	37,446
Chicago.....	10,437	10,546	20,983

From this statement it will be seen that the total number of arrivals and clearances at Chicago during the year lacked but 16,462 of being equal to the combined arrivals and clearances at all the other leading ports above named, and lacked but 1,705 of being equal to the total number at New York and Boston, the two ports next highest on the list in this respect. It also appears that the total arrivals and clearances at Chicago were larger in number than those at Baltimore, Boston, New Orleans, Philadelphia, and San Francisco combined, which aggregated 19,762; that they were equal to the combined arrivals and clearances from New York and Baltimore, numbering 20,989; that they exceeded those from New York and Philadelphia, which numbered 20,554; that they exceeded those from New York, New Orleans, and San Francisco combined, which aggregated 20,603; and that they were larger than the total number at New York, Portland, Falmouth, and San Francisco combined, which was 19,986.

Do not these suggestive statistics demonstrate the expediency and importance of connecting the great lakes with the Mississippi with a free waterway, thus uniting the vast commerce of the lakes with that of the great river, and extending the benefits of each to an immensely enlarged area at a comparatively small cost?

There are no other expenditures, Mr. President, that are as profitable to the whole people as those made for public works. Whatever of the public revenue is devoted to the construction and improvement of great highways of commerce, to opening up harbors on the

ocean or in the interior, is a permanent investment and becomes a constant and continuing source of wealth to the country, bringing back returns to the pockets of the people year after year and adding to the prosperity of all.

THE TRADE AT THE EAST.

PHILADELPHIA, July 10, 1886.—During the past couple of weeks there has been no change of importance in the commercial situation. While general trade is still characterized by quietude, the volume of business in progress in almost every department is accepted as satisfactory and encouraging for this season of the year, and this fact, in connection with cheering reports that are received respecting the crop outlook, as well as the substantial evidences of improvements in the industrial situation, impart a healthy tone to the whole field of commercial activity. The condition of labor is steadily improving, and the building trade in this and other large cities, which was seriously demoralized by strikes and labor troubles, is again developing activity, and there is every reason to believe that the beginning of the second half of the year will witness labor generally throughout the country better and more satisfactorily employed than at any other time since last January. Furthermore, the industries are steadily employed supplying the actual requirements of consumption, which the growing wealth is steadily expanding; and, while trade may temporarily lack the stimulating influences of active buying and selling, clearing-house statistics and traffic returns give evidence of the heavy volume of business that is being transacted daily. Very few times or seasons are more regular than that of

THE WHEAT HARVEST.

Whether the weather is of a kind to make the fore part of summer what the farmers call "early," or "late," the first week in July, in the near neighborhood of Philadelphia, sees the wheat ready for the reaper, and in most instances the harvest is in here by the time the first ten days of the month are closed. As I write, the golden fields, turning indeed to a rich bronze, are visible in all directions, and in many places the harvesters are at work. To the southward of us the crop has been garnered at times ranging from a few days ago in Delaware to a fortnight ago in the Carolinas, a month ago in Alabama and Georgia to six weeks before in Texas, and the wheat harvesting will continue among our Northern neighbors for more than a month to come.

It will be seasonable, therefore, to take a glance at the wheat crop of the United States and of the world, so as to get a notion of their magnitude and meaning. First let me note our own crop, as to its extent and what becomes of it. We should not take the crop of 1885, for that was much less than the average, that one having been in round numbers 357,000,000 bushels, against 513,000,000 bushels in 1884. We should take, rather, an average of the last five years, including, say, 1881 to 1885. This shows the average annual production to be 435,685,524 bushels; the proportion of this used at home for food being 257,249,962 bushels; the annual exportation, 116,161,494 bushels; the quantity retained as seed for the next crop, 53,892,084, thus leaving an annual average remainder of 8,391,984 bushels unaccounted for. From that showing it will be observed that the wheat crop grown in the United States amounts to between seven and eight bushels a head for every man, woman and child; that the proportion actually consumed here as food amounts to between four and five bushels for every person in our population, old and young; that the proportion exported to foreign countries is somewhat (but not a great deal) more than one bushel out of four, or about a quarter of the whole crop; and that about one bushel out of every eight bushels grown has to be retained as seed to plant for the next year's crop.

These facts are important, as well as extremely inter-

esting, and while I have given the precise figures as to the millions of bushels in the aggregate and in the several divisions of the distribution, I have given short round figures, easy to remember as to the bushels grown per head of population, the bushels per head consumed, and the proportion of bushels kept for seed.

Most of our people know, or think they know, that our country is the greatest wheat-growing country in the world. They are right about that, but if asked to name what country is the next greatest wheat grower, many even among the most intelligent would be bothered to furnish an answer. Some well informed persons would say Russia, others quite well posted up with late markets would say India, but it would only be a scattering man or woman here and there who would say France. But such as named France would be right, for that country, in 1886 came with her 313,000,000 of bushels next after the United States. India (whose figures for 1885 I have not) was probably next, and Russia next with 209,000,000 bushels.

Although the United States is the greatest wheat producer, it is not the greatest wheat consumer per capita of population. As already stated, the wheat consumed as food in our country averages between four and five bushels for each person, old and young; but in France the consumption is estimated to reach nine bushels a year for every man, woman and child. This looks to be enormous, averaging, as it would, from a pound to a pound and a half of wheaten bread a day for every person of every age.

We may be excused for doubting the accuracy of the estimate. The French, it is true, are great bread eaters, and have no such variety and abundance of other farinaceous and animal foods as we have, yet, still we may take a large pinch of salt to an average of a pound and a half of wheat bread every day for the French babies as well as the adult workers in the field, the shop and the mine. Exclusive of the crops of Asiatic Russia and China, the world's wheat product for 1885 is set down at about 2,110,000,000, of which our country supplies about one-fifth. Continental Europe grows as much as is needed for consumption there, with an average surplus for shipment, though not large. Great Britain consumes far more than she grows, and it is to supply the shortage there that in most years the United States, India, Russia, South America and other regions contend in the Liverpool market. There is and has been a great glut there, and that's what's the matter with the price of wheat there and here.

PHILADELPHIA'S COMMERCE

has declined because her business men have not had the courage to protect themselves from the illegal extortions of two railroad corporations. Her shipping houses have lost much of their business, and her merchants have allowed their trade to drift to New York and Baltimore. Since the first of the year Philadelphia shipmasters and agents have sent twenty-five vessels in ballast from her wharves and towed them to other ports to procure cargoes for foreign ports; her manufacturers have sent their products to New York to secure cheap rates over the Pennsylvania Railroad to Western markets, her commercial bodies have noted the steady decrease in exports—a drop from nearly 20,000,000 bushels of grain in 1876 to less than 10,000,000 bushels in 1885, but no one has raised his hand in defense of his own. Even though the state constitution guaranteed equal rights to every shipper and provided ample protection from unjust discrimination, there were not two business houses in all the great city of Philadelphia that could be relied upon to fight for the enforcement of the highest law of the state. Where in all history is there a more despicable case of weakness and cowardice than that displayed during the last ten years by the merchants of whom Philadelphia once were proud? The trader or manufacturer who meekly submits while his business is being appropriated by rivals in other cities through the discrimination of railroads has as much stamina in him as was ascribed by Revivalist Sam Jones to one of his horrible examples, whose backbone he likened to "a little, old cotton rag." Within the last week a report has been circulated that the Allan Line Steamship Company contemplated the withdrawal of its vessels from service at this port. In explanation it was stated that great difficulty had been encountered here in procuring cattle for shipment, and that this trouble was not experienced at other Atlantic seaports. Other places are served by competing railroads, but Philadelphia is at the mercy of the Pennsylvania Railroad Company, which by some delusive methods of computation, expects to find greater

profit in reducing rates to Baltimore and to New York to meet the competition of rival lines at those places than in giving fair service to Philadelphia. This is the generous and considerate way in which the Pennsylvania Railroad Company requites the debt it owes to Philadelphia for its creation; this is the way in which it claims to sacrifice itself for the extension of the city's trade.

An effort was made here last week to charter a vessel and purchase a cargo of

WHEAT FOR THE MAURITIUS,

but the plan fell through, owing to the price of wheat being too high. Heretofore the Mauritius were supplied from Australia, but there is a short crop on the island continent this year.

J. C. D

THE GRAIN TRADE OF BUFFALO.

The eastward movement of flour and grain from the West through Buffalo for the month of June, 1886, shows an increase of 332,542 barrels in the receipts of flour and an increase of 704,188 bushels in the receipts of grain, estimating flour as wheat, as compared with the same month last year.

The following shows the imports of flour and grain into Buffalo by lake from the opening of navigation to June 30, 1886, as compared with those for previous years:

FROM OPENING TO JUNE 30.

	Flour, bbls.	Grain, bu.	Grain, inc. Flour, bu.
1886.....	1,293,888	21,421,143	27,890,483
1885.....	497,914	14,283,958	16,773,528
1884.....	494,833	12,138,104	14,607,219
1883.....	579,844	18,867,014	21,766,234
1882.....	552,857	15,439,203	18,203,458
1881.....	366,759	18,539,722	20,363,517
1880.....	374,386	38,714,112	40,586,542
1879.....	164,250	14,576,937	15,398,187
1878.....	277,838	34,254,667	35,674,307
1877.....	173,689	11,121,007	11,989,452
1876.....	168,384	14,417,928	15,259,843
1875.....	270,188	11,829,265	13,180,205
1874.....	412,486	18,250,517	20,312,917
1873.....	361,557	15,591,685	17,398,470

RAILROAD SHIPMENTS.

The following shows the shipments from elevators by rail of grain received by lake for the month of June and from the 1st of January in the years indicated:

MONTH OF JUNE.

	1886.	1885.	1884.	1883.
Wheat, bu.....	657,130	93,063	223,954	275,647
Corn, bu.....	2,536,360	896,710	1,272,209	1,014,088
Oats, bu.....	170,200	7,304	.....	32,797
Barley, bu.....	8,000	.....	.....	.....
Rye, bu.....	.....	562	.....	.....
Total, bu.....	3,371,690	997,639	1,506,163	1,323,432

FROM JAN. 1 TO JUNE 30.

	1886.	1885.	1884.	1883.
Wheat, bu.....	2,507,258	2,624,571	1,198,343	1,258,167
Corn, bu.....	5,018,275	1,808,560	1,565,398	2,779,011
Oats, bu.....	364,900	25,430	1,900	41,470
Barley, bu.....	104,464	87,864	34,374	62,328
Rye, bu.....	.....	5,709	.....	500
Total, bu.....	8,994,897	4,552,134	2,800,015	4,141,476

The following exhibit shows the amount of flour and grain shipped from Buffalo by canal from the opening of navigation to June 30, for the last four years:

	1886.	1885.	1884.	1883.
Canal opened.....	May 1	May 11	May 7	May 7
Flour, bbls.....	621	363	1,188	1,202
Wheat, bu.....	9,545,141	4,789,965	3,954,907	4,222,962
Corn, bu.....	2,731,561	3,723,241	2,452,360	6,274,982
Oats, bu.....	161,910	40,450	1,032,365	1,290,472
Barley, bu.....	69,354	83,940	61,210	106,319
Rye, bu.....	.....	24,748	661,995	596,160
Total, bu.....	12,507,966	8,662,344	8,132,846	12,490,885

*Barley malt, except 2,957 bushels in 1886.

The chemist of the Agricultural Department at Washington finds that the highest weight of wheat per bushel belongs to Colorado, where it is 66.6 pounds, while the lowest weight is shown to belong to Alabama grain, which was only forty-eight pounds per bushel. The average weight of oats for the whole country is 37.2 pounds per bushel, the heaviest again belonging to Colorado, viz., 48.8 pounds per bushel, and the lightest, 24.7 pounds per bushel, to Alabama. In rye, the lightest weight belongs to New York, 56.2 pounds per bushel and the heaviest to Vermont, 64.1 pounds, the average for the whole country being 60.9.



Millers, and all interested, are invited to make contributions to this page. The publishers do not indorse or hold themselves responsible for the sentiments expressed.]

AN ELEVATOR TO BE BUILT.

Editor American Elevator and Grain Trade:—Kindly forward me a copy of your journal. I wish to get the names and addresses of parties making a business of building elevators. We intend putting up an elevator at this point.

Truly yours,
Van Wert, Ohio.

J. E. BARNARD.

LIKES IT.

Editor American Elevator and Grain Trade:—I received a sample copy of your paper, the AMERICAN ELEVATOR AND GRAIN TRADE. It is just what I have been wanting. Inclosed find \$1 for a year's subscription, beginning with June 15.

Yours,

E. L. HAMMOND.

Staubenville, Ohio.

LINSEED OIL MILLS.

Editor American Elevator and Grain Trade:—The insurance papers with one accord attribute the extra hazardous nature of linseed oil mills to the new process. Now I have been at some pains to look into this matter; and the facts are that four old process mills burn where one of the new process mills goes up in smoke. In twelve years only three new process mills have burned, and one of these caught fire from an old process mill.

Yours truly,

TOLEDO.

THE OLD AND THE NEW.

Editor American Elevator and Grain Trade:—The copartnership heretofore existing under the firm name of Waring, Studabaker & Co., is this day (July 1) dissolved by limitation; either partner will sign in liquidation. John Studabaker, David E. Studabaker, John A. Studabaker and James W. Sale have this day formed a copartnership under the firm name of Studabaker, Sale & Co., and will continue the business in grain, seeds and provisions with headquarters at Bluffton, Ind.

Yours truly,

STUDABAKER, SALE & Co.
Bluffton, Ind., July 1, 1886.

FROM MANITOBA.

Editor American Elevator and Grain Trade:—I duly received a copy of this month's AMERICAN ELEVATOR AND GRAIN TRADE. I have been much interested with your paper, and I take pleasure in inclosing \$1 to pay subscription for the same.

After a seed time and spring of exceptional promise in this country, we have had a great deal of exceedingly warm and dry weather. Owing to the want of general rain, our crops in many places will give a light yield. In some districts, where rain has been more abundant than in others, wheat looks well; but on the whole the yield will be below an average. The prospect is for an early harvest and a fine sample.

Yours faithfully,

THOS. THOMPSON.

Brandon, Man., June 30, 1886.

WHEAT IN STORE FOR THIRTEEN YEARS.

Editor American Elevator and Grain Trade:—In your last issue I noticed an item about the storing of wheat for four years by a farmer of Tiffin, Ohio. A farmer of this place on Sept. 13, 1873, placed in Elevator "B" 336 bushels of wheat. On the first day of July, 1878, he placed 1,773 bushels in the same elevator. Shortly after he sold 173 bushels for \$1.50 per bushel.

The elevator property changed hands May 25, 1886, and two days later the new owners induced the farmer to sell his equity in the wheat for \$350. Had the elevator charges been more than nominal he would long since have ceased to have any value left. At one time this farmer was offered \$1.50 per bushel above all storage charges. The elevator receipts are framed and occupy

a conspicuous place in the office of a prominent commission firm at Chicago.

Yours truly,

G. L. L.

Nashua, Iowa.

OAT CLIPPER WANTED.

Editor American Elevator and Grain Trade:—I inclose \$1 for the AMERICAN ELEVATOR AND GRAIN TRADE for one year. I also want to know if there is any such a machine as an oat clipper for clipping off the ends of oats. If there is any such machine in existence I would like to know where it is manufactured.

Yours,

F. L. MARK.

Clio, Mich.

SOME GENERAL RULES OF LAW AFFECTING COMMISSION MERCHANTS AND AGENTS.

BY A MEMBER OF THE CHICAGO BAR.

When you make a contract with an agent or one who acts for another, that person for whom the agent acts, whether you know he is interested in the contract or not, can take the benefit of the contract and can sue on it as though he had been named in the contract. If, however, you have paid the agent in the ordinary course of business, before you knew he was simply an agent, you will not be liable to the principal.

If goods are sold to one who purchases for another, and the seller does not know that the person buying is in fact buying for some one else, and does not know who the principal is, and has charged the goods to the person with whom he dealt, when he discovers the principal for whom the goods were in fact bought, he may charge the goods to such principal and sue him for their value.

If, however, the seller knows that the man he sells to is an agent for some one else and knows who the principal is and still elects to give credit to the agent and charges the goods to him, he can not afterward charge the principal.

It is the business of every person who deals with an agent to know the extent of the authority the agent has from his principal, for the agent can, as a general rule, only bind his principal to the extent of his authority, and where the authority is to do a particular kind of business, or a special act, he can not bind his principal in any other business than that he is specially authorized to do.

If, however, an agent has been permitted by his principal to go on and do acts which were originally beyond his authority, and the principal has recognized and approved such acts, the principal will be held bound as to persons who have been led to believe that the agent had such authority, for by recognizing such acts beyond the authority of the agent the principal is deemed to have ratified them.

So where a man is employed to buy or sell goods only, but has no authority to collect for them, if the principal permits him habitually to collect, he will be held bound by payments made to the agent.

There are also what is in law termed implied agencies. These arise as to persons who transact a general business as agents for others, such as brokers, factors and commission merchants. So where goods are intrusted to a commission merchant whose general business is to sell goods, the law presumes that he has the authority usually and ordinarily exercised by men in his business, and he can therefore sell and deliver goods intrusted to him and give a good title to the buyer, even though he may have sold in violation of his instructions, as for example where a commission merchant is instructed to sell only for cash and he sells on time, the purchaser takes a good title to the goods, and the only remedy of the shipper is against the commission merchant for violation of his instructions.

A factor or commission merchant, where he has no special instructions from his principal to the contrary, is presumed to have the right to sell on the ordinary credit or according to the custom in the market where he deals, and every person dealing in a particular market is supposed to know the customs and usages of that market.

If, however, a commission merchant sells his principal's goods out of the ordinary course of business, as where he trades them off for other goods, or disposes of them in payment of a debt due from himself, or pawns them, such acts not being in the usual course of trade, the purchaser does not get a good title to the goods

again. The owner, and the owner may replevy the goods in the hands of such purchaser who has obtained them by any such means.

Where a factor or commission merchant has sold goods on credit in the ordinary course of business and charged himself in his account with the principal with the net proceeds of the goods, such charge does not of itself make the commission merchant absolutely responsible for the amount, if the buyer proves insolvent and the debt is lost, but he may charge the loss back to his principal, provided he has acted in good faith and the debt has not been lost by his negligence.

If, however, he in any way converts the proceeds to his own use, or does any act which in law amounts to an appropriation of it, as where he includes the amount of the sale of his principal's goods in a note to himself for other goods of his own or another's, or takes the note of a third person for the goods, then he will become personally responsible for the proceeds.

CORN.

Corn is of American origin, and has only been introduced into the Old World since the discovery of the New. Attempts have been made to prove the contrary, but it is, I think, well settled that our common corn, sometimes called Indian corn, was not used or known off the American continent previous to the year 1500. Travelers in Asia and Africa are wholly silent on the subject of corn before the discovery of America, and in the Hebrew and Sanskrit languages there are no names for this plant. One explorer, it is true, found an ear of maize in a sarcophagus at Thebes, but it is believed now to have been the trick of an Arab impostor. If maize had existed in ancient Egypt, it would doubtless have been seen in some of the monuments, and would have been connected, as are all other remarkable plants, with their religious ideas. When America was discovered corn was one of the staples of its agriculture from Central America to the St. Lawrence River. Every Indian village had a patch of corn about it, which the natives gathered in autumn and piled in heaps on the ground. In Mexico the Montezumas had a goddess who bore a name derived from maize, and the first fruits of the corn harvest were offered to her. Although America has been explored by a great number of botanists and naturalists, none have found corn as a wild plant. It has always been cultivated in its present form at least, and it is yet to be determined from what particular form of plant it did originate. The certainty of its origin anterior to cultivation will probably yet come from archaeological discoveries.

ORIGIN OF THE ELEVATOR AND CONVEYOR.

The improvements which were originated by Oliver Evans were chiefly devices for handling the grain and its products during the processes of manufacture, without the employment of manual labor. These devices were of various kinds, adapted to the nature of the service they were to perform, and in his publications Evans claimed five different ones, viz.: The *elevator*, for raising vertically; the *descender*, transferring down an incline; the *conveyor* and the *drill*, for moving horizontally, and the *hopper-boy*, whose function was to spread and cool the meal and feed it regularly into the bolting hopper. The *elevator*, perhaps the most important of these, was a modification of the oldest of machines, the "chain of pots," which had been used for raising water from time immemorial. As modified for raising grain, it was constructed of an endless flat band or strap, carried upon two drums or pulleys, and upon which, at regular intervals, a number of small troughs or buckets were so arranged that in passing under the lower pulley the buckets filled, and in passing over the upper one emptied themselves into a suitable box, from which a spout discharged the contents required, the apparatus being kept in motion by power applied to the upper pulley. This machine has been vastly increased in size and capacity since Oliver Evans first put it to work in his little New Castle mill, and it is now applied to a multitude of uses that were never contemplated by him; but the device is essentially the same, and has proved itself to be one of the most useful of his inventions. The *descender* he himself described as "a broad, endless strap, of very thin, pliant leather, canvas or flannel, etc., revolving over two pulleys, which turn on small pivots, in a case or

trough, to prevent the grain or meal from falling more than the other. The grain or meal falls from the elevator on the upper strap, and by its gravity and fall sets the machine in motion, and discharges the load over the lower pulley. There are two small buckets to bring up what may spill or fall off the strap and lodge in the bottom of the case." Although this machine would work by gravity even when the descent was small, yet Evans recommended that power should be applied to it where practicable; and when driven in this way it became the prototype of the *belt conveyors* of the present day, which are generally used for the horizontal movement of grain in large quantities. Concave carrying rollers or other devices are now employed to compel the belt to form a trough which will hold a greater amount of grain than would stay on a flat belt. Evans also used for the same purpose the *drill*, which was simply an elevator laid horizontally, with wooden cleats, or, as he called them, "rakes," instead of buckets. These rakes scraped the grain along the bottom of the case or box in which they ran. The *conveyor* was simply a quick pitch screw of two or more threads running in a trough or box, into which it fitted closely. This screw when used for grain, Evans made of a round wooden shaft, around which he nailed two or more sheet iron helices, or spirals, which, when the shaft was rotated, forced the grain along in the trough. When he desired to move flour or meal he substituted for the sheet metal helix a number of radial arms arranged spirally around an octagonal shaft.

CORN AND OATS.

The *Cincinnati Price-Current* has made a special investigation into the condition and future outlook of the corn and oat crop in this country, the result of which is the following data, as compiled in the issue of the journal of July 8:

The acreage planted to corn seems to have gained a small increase compared with last year, and this increase is extended to almost all the corn-growing states, Tennessee being the only state which will have its area reduced, probably more than five per cent. The total increase of acreage will probably amount to 1,300,000 acres. The general average condition of the corn crop is put at 94, being in the several states as follows: Missouri, 102; Kansas, 100; Illinois and Michigan, 95; Iowa, 94; Indiana, 92; Ohio, Nebraska, Kentucky and Wisconsin, 90; and Tennessee, 80.

In such portions of Minnesota and Dakota where corn is cultivated to any considerable extent, the outlook is generally quite favorable.

The following compilation from the Department of Agriculture reports shows the acreage and production of corn in the United States in 1885, for the states and divisions mentioned:

	Acreage, 1885.	Crop, 1885.
Ohio.....	3,017,464	111,865,000
Indiana.....	3,720,681	131,994,000
Illinois.....	8,559,036	268,998,000
Iowa.....	7,549,542	242,496,000
Missouri.....	6,295,728	196,861,000
Kansas.....	4,884,550	158,390,000
Nebraska.....	3,526,475	129,426,000
Kentucky.....	3,551,067	90,569,000
Tennessee.....	3,563,500	75,581,000
Michigan.....	338,082	30,706,000
Wisconsin.....	1,088,019	32,750,000
Minnesota.....	648,913	18,431,000
Dakota.....	530,100	15,345,000
Total.....	47,180,447	1,503,412,000
Six New England States.....	239,722	8,710,000
Four Middle States.....	2,715,191	83,908,000
Twelve Southern States.....	22,013,865	333,572,000
Other States and Territories.....	260,925	6,574,000
Total.....	73,130,150	1,936,176,000

The average yield of corn in 1885 for the thirteen states mentioned above in detail was 31.4 bushels per acre, and for all other portions of the country 17.1 bushels; for the entire country, 26.5 bushels. For several previous years the average yield was as follows: 1884, 25.7; 1883, 22.7; 1882, 24.6; 1881, 18.6; 1880, 27.5.

In regard to this year's oat crop, the June report of the Department of Agriculture says the acreage will show an increase over that of last year of about one-half million acres. A slight reduction is noted for Kentucky and Ohio, where the area was abnormal last year. The general average condition of the crop on June 1 was 102, when compared to last year. The figures which the *Price-Current* arrives at from special information as to the averages of condition in the corn states, compared with the condition of the 1885 crop, on July 1, together

with the estimated yield of the 1885 crop, are as given in the table below:

	Condition, 1885.	Estimated crop, 1885.
Ohio.....	95	102
Indiana.....	95	103
Illinois.....	85	95
Iowa.....	88	100
Missouri.....	92	96
Kansas.....	85	97
Nebraska.....	90	99
Kentucky.....	100	100
Tennessee.....	100	100
Michigan.....	80	102
Wisconsin.....	80	93
Minnesota.....	72	96
Dakota.....	82	103
Total.....		390,000,000
Other States, etc.....		150,000,000
Total.....		540,000,000

The above figures for the average condition of the crop would imply a reduction, this year, of 90,000,000 bushels, when compared with last year's crop. The average yield for the whole country, according to the same estimate, would be 23.5 bushels to the acre, against 27.6 bushels last year.

According to the Department of Agriculture reports the acreage and production of oats in the United States in 1885 was as follows:

	Acreage, 1885.	Crop, 1885.
Ohio.....	1,003,680	37,470,000
Indiana.....	1,014,630	27,178,000
Illinois.....	3,290,081	107,988,000
Iowa.....	2,210,338	74,718,000
Missouri.....	1,267,849	28,312,000
Kansas.....	853,920	27,145,000
Nebraska.....	700,048	24,028,000
Kentucky.....	491,545	10,225,000
Tennessee.....	640,096	10,752,000
Michigan.....	615,500	21,789,000
Wisconsin.....	1,412,474	47,778,000
Minnesota.....	1,076,393	37,544,000
Dakota.....	352,800	13,229,000
Total.....	14,909,654	468,134,000
Other States, etc.....	7,873,976	161,273,000
Total.....	22,783,630	629,407,000

For the last six years, the area in oats, the total production and the yield to the acre in this country, according to the same reports, have been as shown by the following summary:

	Acreage.	Crop.	Yield.
1885.....	22,783,630	629,409,000	27.6
1884.....	21,300,917	583,628,000	27.4
1883.....	20,324,622	571,233,400	28.1
1882.....	18,494,691	488,250,610	26.4
1881.....	16,831,600	416,481,000	24.7
1880.....	16,187,977	417,855,380	25.8

PRICES SEVENTY YEARS AGO.

To dispel the illusion of certain people that the golden age was our grandfather's time, the *Philadelphia North American* thus compares the prices of what the farmer had to sell then and now as follows:

	1816.	1886.
Wheat, per bushel.....	.44	.99
Oats, per bushel.....	.15	.41
Corn, per bushel.....	.20	.46
Barley, per bushel.....	.25	.50
Butter, per pound.....	.12	.32
Cheese, per pound.....	.06	.10
Eggs, per dozen.....	.05	.12
Cows, per head.....	\$15.00	\$50.00
Hay, per ton.....	5.00	17.00
Sheep, per head.....	4.00	15.50
Swine, per head.....	.75	2.00
Farm labor, per month.....	8.00	18.00

The prices of some of the principal articles the farmer uses are also given for the two periods, as follows:

	1816.	1886.
Steel, per pound.....	.17	.12
Nails, per pound.....	.12	.04
Broadcloth, per yard.....	\$16.00	\$4.00
Wool blankets, per pair.....	15.00	7.00
Cotton cloth, per yard.....	.30	.12
Calico, per yard.....	.25	.06
Salt, per bushel.....	\$14.00	15.00

And from these figures the *North American* draws the following deductions: "It will be seen that the cost of farm labor has increased rather more than 100 per cent. But the selling price of farm products has increased all the way from 100 to 400 per cent. At the same time the cost of most of the staples the farmer must buy has decreased from 20 to 50 per cent."

Winter wheat in Illinois is yielding well, producing from thirty-five to forty bushels in some sections.

STATE REGULATION OF WAREHOUSES.

[Part of the argument of Abner L. Backus, of Toledo, in answer to C. A. King, before the Agricultural Committee of the Ohio House of Representatives.]

Wherever a state has attempted to assume the management of private business affairs, and usurped the rights and privileges of its citizens, it has committed a failure. The state of Illinois has undertaken to do so at Chicago—with a loss of \$20,000 as result of such management for the year 1885. And bear in mind the fact that their inspection charges under state management, as compared with Toledo under the management of the Produce Exchange, are as follows:

Chicago inspection, per carload, in and out.....	35 cts
Toledo.....	25 cts
Chicago inspection, per 1,000 bushels, vessel cargo.....	50 cts
Toledo.....	40 cts

So you can see that the producing farmer is at Chicago, under state management, charged on every carload of grain shipped to that market 40 per cent. more than he would be if he shipped to Toledo, where the inspection department is under the control and management of a set of thoroughly educated grain business men. And upon all grain forwarded by lake the farmer is further taxed 25 per cent. more per 1,000 bushels for inspection under state management at Chicago than he is under the management of our Toledo Exchange. Now, Mr. King and every other intelligent grain man full well know that if, with the magnitude of the grain trade at Chicago as compared with that of Toledo, the inspection department under state management, 33 per cent. higher than at Toledo, does not pay its expenses, that it will surely not do so at Toledo under state management.

It will be a failure in Ohio if the state attempts it. That financial loss will follow is inevitable, unless the inspection fees are advanced to a point that will give competing grain centers the advantage—levy an additional and unjust tax upon the producer, reduce the volume of the great grain traffic which has been after years of heroic struggle on the part of grain dealers so built up that Toledo has the enviable reputation of being the largest winter wheat market in the West. It will transfer the money capital of the city to other grain centers in other states, and most seriously reduce the tax duplicate, state, county, and municipal.

In my argument heretofore presented to your Committee I unintentionally and erroneously stated that Illinois was the only state where the inspection system was under state control. The state of Minnesota, by law enacted a year ago, assumed the control of the grain inspection system, and I hereby give you an extract from the Duluth Board of Trade's annual report for 1886, just issued:

"At the last session the Legislature of this state enacted a law providing for a commission to regulate and control the warehousing and inspection of grain, its primary object being to give the producer the utmost latitude in marketing his product to the best advantage, greatest profit, and least restraint. Commissioners were appointed by the governor to carry out its enactments, who have assumed entire control of our inspection system, appointing a corps of inspectors, weighmasters, deputies, etc. This Board has co-operated with them in good faith to give the law a fair and honest test in its workings, but have become satisfied that in its present shape it is practically a failure, and the class who sought to remedy their supposed grievances by such legislation are really the greatest sufferers. We as a market have also suffered to some extent, as some grain has been turned from here to points where the law has not been so rigid in its workings, or technically violated. Politics and the grain business can no more mingle than oil and water. Shippers have tested this truism since last May, and we believe will ask the next Legislature to repeal the law and allow practical business men to inspect and warehouse their own grain and do away with a cumbersome 'Political Scheme,' and relegate politicians to a field more in harmony with their ability."

The extract expresses the whole argument, viz.: to "allow practical business men to inspect and warehouse their own grain."

Through your indulgence I will refer to another absurd and groundless point made by Mr. King, on page 5. He says: "A deputy inspector at a salary of \$600 per annum had it raised to \$1,000 per annum by the influence of a certain house, and thus laid him under obligations to that house." I feel sure that your Committee will place but little reliance upon a charge of that mag-

nitude, when its author had not the courage to name the house, who, I am satisfied, would brand it in such manner as it justly deserves.

As the parties referred to are not addressing you, I will in their behalf, in the mildest and most courteous manner, state that there is not a shadow of foundation upon which Mr. King's charge is based, and seriously presented as one of the reasons why the inspection department of the Produce Exchange should be transferred to state management.

The facts of the case are these:

Under a former Chief Grain Inspector an exigency arose which induced the Board of Directors to establish the office of Chief Assistant Grain Inspector, entirely as an experiment, and the salary was fixed at \$1,000 for the office, to correspond with and compensate for the increased, additional, and responsible duties imposed. When the change Mr. King refers to took place the Chief Inspector was paid \$2,500 per annum, the Chief Assistant \$1,000, one other assistant \$720, six others \$600 each per annum. Prior to creating the office of Chief Assistant the gentleman so promoted was receiving \$840 per annum, instead of \$600, as Mr. King so positively asserts.

Mr. King has given a table of wheat production in this country, and assumes that because the aggregate increases the receipts of grain at Toledo ought to increase instead of diminishing, and in his usual incoherent method attempts to show that this decrease can and should be charged to wheat mixing, unfair inspection and general deviltry. It is a very narrow view to take of this subject, and directly contrary to reasons he promulgated a year ago, as I will show before I close.

Toledo receipts of grain have not been relatively depleted in greater ratio than have Chicago receipts during the past three years. Bear in mind, with Mr. King every thing is lovely at Chicago where the state of Illinois is operating the warehousing and inspection system at an annual cost to the taxpayer of \$20,000. What, then, is the real reason? It is multiplied railways, consolidated into long consecutive lines East and West, from the Atlantic to the Pacific coast, and North and South from our Northern chain of lakes to the Gulf of Mexico, whose aim and interest is to take the traffic from the water competition, and move it over their connected and unbroken lines to the seaboard, at ruinous loss to the share and bondholders of roads thus consolidated.

Railways have been built far in excess of the demands of trade, and the cheap water transportation loses its natural competing power in this destructive competition, which destructive condition will continue until the business demands of the country increase to correspond with railway transportation facilities, when the roads can maintain fair and remunerative freight rates. Then the lake points may regain a portion of their losses. This is the real reason for the decrease in receipts at lake points, and not the gratuitous and groundless assumption of unfair dealing, made by Mr. King.

On page 11, in the second paragraph, Mr. King makes an admission that seems to me greatly weakens, if it does not entirely destroy, the force of all he previously said to your Committee on what he calls wheat mixing, and which admits as well the truth of what Mr. Smith has said, that the bill would not prevent what he sought to do in that line. He says the bill "allows the warehouseman to clean the No. 3 and again submit it to the inspector, who, if he finds it worthy, is authorized to give it a higher grade," and again, "Both lots are graded honestly and fairly as No. 2, and no injustice is done to buyer or seller by running them together." Of course, if you clean the impurities and small grains from wheat and thereby raise its quality, the grade should be raised. That is precisely all that Mr. King accuses any elevator manager in Toledo of doing. If that is and can be done with No. 3, what reason can Mr. King or anybody else assign for not doing precisely the same thing with the grades below No. 3—that is, if he desires honestly and fairly to protect the producer and country shipper?

The whole question is thus admitted and settled, and as a result what possible basis is there for all this discussion concerning improper warehousing of wheat in Toledo? Mr. King makes a number of further references to the arguments presented by Mr. Smith and myself, but they are quite unimportant, and, indeed, in this respect, they correspond with all the points he has made in his answer.

The Produce Exchange, in the spring of 1885, fully appreciating the fact that through consolidated railway

lines, and especially and particularly through the unfair discrimination against Toledo by the Wabash Railroad managers, and elevator and dock property owners at Detroit, the winter wheat center of the West was in danger of being transferred from Toledo to Detroit, at a ruinous price to the Wabash share and bondholders, appointed a committee of their number to go to St. Louis and seek to present good and sufficient reasons to the Wabash Railway managers, showing conclusive facts and figures that the grain freight discrimination against Toledo, diverting it to Detroit, was an injury to the city, as it was an absolute loss to the railway.

Mr. King was one of that committee, who, with his associate delegates, presented the question well and ably to the railway officials, but on their return were forced to report to the Exchange that they had failed to accomplish the object sought.

The Wabash Elevator Company, located at Toledo, and having four large elevators, with a storage capacity of nearly 4,000,000 bushels, felt the disastrous effects of this grain diversion most keenly, and hoping that by carrying their just complaints to the higher power representing the Wabash Railway in New York, they could get relief, concluded to appoint a special committee, thoroughly conversant with the grain traffic and the causes of the serious decline of grain receipts through that channel at their Toledo elevators, and selected Mr. King as one of their committee, who, to the extent of his ability, presented written and oral arguments to those in New York, who were presumed had, or would have, the power to correct the wrong complained of. His arguments bristled all over with an array of facts and figures, covering an area of nine miles on each side of the Wabash Railway between Toledo and St. Louis, a distance of 450 miles, showing wherein our city was most shamefully discriminated against on freight traffic rates, and assigning those as the only true reasons why our grain receipts were being so much reduced. In all that he said he never raised the question of unfair or dishonest inspection or warehouse charges at Toledo, nor did he assign those complaints as a reason for Toledo's loss of her grain traffic. On the other hand, he held that the only cause and reason of our loss of grain receipts was wholly and entirely chargeable to the management of the Wabash Railway system. How long after his appearance before the railway officials in St. Louis and New York, his mind underwent such convulsion as to cause him to change his views upon so important a question, I can not say. If his views, as now expressed and made public, should unfortunately pass in review before the able railway officials he addressed in the spring of 1885, whilst they might be indisposed to give Mr. King credit for stability on important questions, they would not fail to accord to him the championship as a mind acrobat possessing the rather unusual and unenviable accomplishment to be able to ride both sides of important questions in an incredibly short space of time. Mr. King was either right in his views in 1885, and wrong now, or wrong in 1885 and right now, and as his reply to my former arguments is so defective, I am justified in saying that the reason he assigned for our short grain receipts to the Wabash Railway officials in 1885 was true and correct.

Before closing, I desire to make the following comparative elevator charges between Chicago and Toledo:

CHICAGO.

Elevation and first ten days' storage, $1\frac{1}{4}$ c.; $\frac{1}{2}$ c. per bushel storage for each additional five days. Making for six months a tax of $10\frac{1}{4}$ c. per bushel.

TOLEDO.

Elevation and first ten days' storage per bushel, 1 c.; $\frac{1}{4}$ c. per bushel storage for each additional ten days. Making for six months a tax of $5\frac{1}{2}$ c. per bushel, or 40 per cent. for six months less than at Chicago.

In closing, I have with great respect to ask your careful criticism of all that has been said by representatives of the Cincinnati Chamber of Commerce, Messrs. Smith, Nash, and myself opposing the bill. That done, I feel assured, looking to the interests of the Ohio producer, shipper, and dealer in grain, that you will report against the passage of the bill now under consideration, and permit the business men of the state, in a business way, to manage the grain trade as they have ever done in the past, in a most satisfactory manner, in the interest alike of the farmer and dealer in grain. All which I have the honor, with great respect, to submit for your careful consideration.

INCIDENTALS.

Gill & Shryock, Meadville, Pa., want a portable dryer for grain.

The prospective wheat yield of Michigan is put at 22,240,000 bushels.

It is said that the Texas wheat crop is disappointing both in quality and quantity.

Grain receivers in Chicago are kicking vigorously against the lax inspection of corn in Chicago.

And now they say that California's wheat crop will reach 70,000,000 bushels. A wild figure, certainly.

Nearly half the wheat throughout the Lebanon Valley in Pennsylvania is reported to be destroyed by the army worm.

The first new wheat from Missouri reached St. Louis June 24. It was from Siketon, Scott county, on the Iron Mountain R. R.

The area sown in wheat in Manitoba this year is 450,000 acres, which, it is estimated, will produce 11,250,000 bushels of grain.

W. T. Baker says it costs \$8 to \$8.50 per acre to raise wheat in the Northwest, and that farmers declare Irish dividends every fall.

The Sioux Falls Brewing Company, of Sioux Falls, Dak., has paid the farmers of that section nearly \$38,000 for barley the past season.

The farmers of Fayette county, Ill., with the view of exterminating the chinch bugs, have agreed not to sow any wheat for three seasons.

The oat crop of between 500,000,000 and 600,000,000 bushels, at 30 bushels to the acre, calls for 1 per cent., or 30,000 square miles of our total area.

A hay crop of 40,000,000 tons, at the average of a good season, $1\frac{1}{4}$ tons per acre, calls for less than 2 per cent., or 50,000 square miles of our total area.

The St. Louis bears are said to have been caught to the tune of \$2,000,000 on the recent bulge in Chicago. A quarter of that amount would be nearer the truth.

The lowest price for wheat we have yet seen is quoted from Moosomin, Northwest Territory, where pretty good wheat has been sold for eighteen cents per bushel.

Why does the Continental Insurance Co. still cling to its convicted felon of an agent, Lorenzo Dimick? That is a question that a good many insurers are asking.

A carload of corn was recently shipped from Nebraska to Chicago, which was sold at the latter city for \$3 less than the freight, and the owner had to pay the balance.

August Shiffer, the grain merchant defaulter, who fled to Santa Cruz, Cal., from Joliet, Ill., on account of \$20,000 indebtedness, was returned to the latter place on June 28 and placed in jail.

It has been discovered in England that if you take the nutritive properties of wheat, barley and oats, the production of each is pretty nearly equal per acre, and the price of each almost exactly equal.

Milwaukee is apparently regaining her position as a grain shipping port. In the month of May, this year, she shipped 1,069,000 bushels of wheat, the largest aggregate of any one month for years.

It seems a little strange that the report of a rain at Huron, Dak., should cause a decline in the Chicago market, but that is what it did do a few days ago. Speculators weigh influences on an exceedingly sensitive pair of scales—too sensitive, in fact.

No city in America is more vitally interested in the extension of foreign commerce in breadstuffs and provisions than Chicago. On no other city would the prostration of the agricultural interests in America fall with more crushing force. It is of paramount importance to every industry in this city that the great grain-growing and stock raising sections of the West and South should be prosperous. Anything that seriously affects them affects

Chicago, and they cannot be remorselessly taxed and plundered and their foreign markets taken from them without bringing upon them a depression which will find a certain and speedy reflex upon the commerce of Chicago.—*Daily Business.*

The grain receivers and handlers of Baltimore are "kicking" against the "weigh-bag" system, and want it abolished. By this system only one bushel in every 60 is weighed with wheat, and one bushel in every 100 with other grain, and an average then made. This is considered a very inaccurate and an "old-fogy" process, and the plan proposed is to run a carload of grain on the scales, weigh the whole car, and take the tare off the car.

In the course of an article on the "Longevity of Vegetable Germs," the *Scientific Arena* says: "It has been asserted that wheat taken from the catacombs of Egypt, and 3,000 or 4,000 years old, has germinated and produced a new variety; but this has been equally denied, and the proof of it has been challenged. If it can even be shown that no such wheat has ever germinated, it would still be no proof that the germ was destroyed, but only that its vitality was suspended. In some other conditions of soil, air, etc., in some other environment, it might yet show life."

The New York Produce Exchange is moving for the abolition of the tax of 1 cent per bushel on grain passed directly from the railroad company's elevators into vessels at that port. The tax was put on to stop the clamor of the Pennsylvania and Baltimore & Ohio Companies, which insisted that it should be done, as one writer aptly expresses it, "to even the disadvantages of one port against the prestige and better commercial facilities of another port," Philadelphia and Baltimore being the places sought to be benefited at the expense of New York. The tax in question is unjust and outrageous.—*Daily Business.*

The Dakota Railroad Commissioners were rather premature in announcing a triumph in their negotiations with the railroads. About a week ago they advised the press that, as the result of their efforts, the roads had decided to reduce freight rates from 15 to 20 per cent., the reduction on wheat alone, in Dakota, involving a saving to the farmers of \$650,000 a year. But the Manitoba officers now say that they had intended a reduction; that on the basis of their figures the amount would be about \$600,000 on all the roads in Minnesota and Dakota, on other articles as well as wheat. The time of the contemplated change is Aug. 1.

At the recent convention of the Millers' National Association, one of the members dressed down the elevator men and speculators as follows: "The elevator magnates not only determine the quality of our wheat, but also dictate artificial prices in such arbitrary ways that flour prices have ceased to exert any influence on wheat values, as though there was no connection between wheat and flour. We millers ourselves are in a large measure responsible for this. We form a good-sized contingent of that army of simpletons who rush into the vortex of grain speculation in the vain hope of realizing a fortune, and when we come to a stop finally we resemble shivering sheep, shorn of our wool. Grain gambling is the worst and most foolish of all games of chance, because against the ringsters an outsider has absolutely no chance, and the effect of this species of gambling is destructive to all legitimate milling business. The innocent have to suffer with the guilty."

The costs of transportation and the unlawful aggressions of railway corporations are subjects of most vital concern to the great grain-producing centers of the West. As the price for grain falls away in the great trading marts the rates of transportation are increased, placing the producer between two ravenous forces, to escape from which he is compelled to sacrifice one-half his crop in order to get the other half to market; and even then he does not escape this unwarranted, un-American thralldom, for the process must be repeated annually. This state of affairs is chargeable, almost wholly, to rapacious railway management, which tramples underfoot and defies the law, rates being fixed on the principle of charging "all that the traffic will bear," instead of charging a rate which will yield a reasonable net profit. By these means dividends are declared on stock, no matter how much water has been injected; the greater the amount of water the heavier the tax on the grain producer. The burden is becoming too great to be carried patiently; yet, notwithstanding vehement protests and unmistakable indications of a storm which will

try the very life of their enterprises, railway magnates continue to add to the load which is crushing the agriculture of the West. Exorbitant charges, enforced by unlawful pools, are the order of the day, competition is being choked, and oppression is running rampant.—*St. Louis Miller.*

Wm. Young, of Milwaukee, after a trip through the Northwest, said last Monday: "To sum up the whole matter, the wheat yield will not be over a half crop, owing to the drought. The crop is short straw, very spotted and thin, with very short heads. The oats crop is looking worse than the wheat, many fields being so short and thin that they will not be harvested. Many flax fields are worthless, while others are looking well. Corn is looking very fair, and the farmers say they will have a good crop. Barley showed very short. The straw is very thin and was being harvested. With nice dry weather the farmers will begin harvesting wheat in about ten days. They are very much disheartened."

Joseph Barth, a wealthy farmer living in the neighborhood of Pierron, Ill., last fall hid away in his oat bin \$355 in gold. Not long ago he hauled his oats to market, but he had forgotten all about his hidden treasure, and the money, with the oats, was dumped into a car. Suddenly it dawned upon the mind of the granger, and a diligent search for the money was at once instituted, which at least resulted in the finding of the cash tied up in a small rag. Some ten years ago the same man hid away \$500 in paper behind a cupboard in the kitchen. Six or eight months later he purchased a piece of land, intending to make a payment on it with this \$500. On going to the place he found that a mouse had made a nest out of the bills and that they were cut up in such small pieces as to be worthless. It seems this worthy farmer has a fancy for hiding away his wealth; but it is curious all the same, that his bad luck in the first case did not teach him this lesson: Never hide away money, even though it be in a grain bin!

THE WHEAT CROP.

In its issue of July 1, the Cincinnati *Price Current* has a detailed statement in regard to the condition and promise of this year's wheat crop, with comparisons to the crop of last year. The calculations and compilations are based on a great number of reports from correspondents of the *Price Current* in all portions of the leading wheat growing states east of the Rocky Mountains. The general result from these informations is a slight change from former indications as to the growth of winter wheat, and a somewhat greater reduction in estimates for the spring crop. The winter wheat districts embrace the four middle states (New York, New Jersey, Pennsylvania, Delaware), Ohio, Michigan, Indiana, Illinois, Missouri, Kansas, the Southern states; besides California and Oregon, while all the other states are classed as spring wheat districts.

The acreage of winter wheat sown for the 1885 crop and the acreage harvested, compared with the estimated acreage in April last of the 1886 crop, as reported by the Agricultural Department, are computed as follows:

	1885 Crop.		Reported for 1886.
	Sown.	Harvested.	
Ohio.....	2,611,178	2,018,952	2,585,066
Michigan.....	1,750,334	1,619,929	1,732,732
Indiana.....	2,491,375	2,518,451	2,306,806
Illinois.....	2,511,810	1,355,905	2,135,039
Missouri.....	2,147,985	1,517,538	1,976,146
Kansas.....	1,828,630	1,060,250	1,531,819
Kentucky.....	1,170,240	1,055,760	1,111,738
Tennessee.....	1,201,607	1,175,882	1,166,519
California.....	3,034,000	2,822,400	2,993,760
Oregon.....	858,924	876,102	881,692
Four Middle States.....	2,417,681	2,299,861	2,364,196
Twelve Southern States.....	3,963,802	3,921,256	3,876,351
Total, acres.....	25,973,466	22,146,350	24,724,594

These figures show a total reduction in the reported April acreage for 1886 of 1,248,572 acres, when compared to the acreage sown last year, but an increase of 2,578,544 acres over the acreage harvested last season. The difference between the acreage sown and that harvested last year was 3,827,116 acres, or nearly a reduction of 15 per cent. in the area sown. In Ohio this reduction was 22 per cent.; in Michigan nearly 7 per cent.; in Illinois only half of the area sown was harvested; Missouri shows a reduction of nearly 30 per cent., and Kansas harvested only 58 per cent. of the area sown. There is a curious anomaly in the figures for Indiana and Oregon, showing both an increase in the area harvested over that sown.

The estimated production of winter wheat in the districts mentioned above, as computed from the reports of

h2 Price Current, are shown by the following table, giving also the figures for the 1885 crop:

	Estimated, 1886.	Crop, 1885.
Ohio.....	31,000,000	21,563,000
Michigan.....	25,000,000	31,261,000
Indiana.....	32,000,000	26,650,000
Illinois.....	28,000,000	10,683,000
Missouri.....	25,000,000	11,275,000
Kansas.....	16,000,000	11,197,000
Kentucky.....	13,000,000	8,821,000
Tennessee.....	8,000,000	3,759,000
Eight States.....	180,000,000	119,248,000
California.....	45,000,000	26,592,000
Oregon.....	15,000,000	13,916,000
Four Middle States.....	28,000,000	26,242,000
Twelve Southern States.....	27,000,000	23,816,000
Total, winter.....	295,000,000	211,814,000

According to these figures the total gain of this year's winter wheat crop would be about 83,000,000 bushels over that of last year's. With the exception of Michigan, all the winter wheat states will presumably have their crop increased considerably. Kentucky, Tennessee, and Illinois show a remarkably large increase over last year. But it should be borne in mind that the crop of Illinois last year was unusually light, amounting only to 10,683,000 bushels, while in 1880, for instance, this state produced 60,958,000 bushels, and in 1882, 52,303,000 bushels. California and Oregon combined will yield about 60,000,000 bushels, although a larger quantity is claimed by Pacific coast authorities.

The estimated area in spring wheat this year is slightly smaller than that harvested last year. Dakota and Wisconsin are the only states showing an increase, with a corresponding decrease in other sections, as exhibited by the following table:

	Estimated acreage, 1886.	Acreage, 1885.
Minnesota.....	2,900,000	3,084,274
Iowa.....	2,600,000	2,683,944
Dakota.....	2,500,000	2,187,084
Nebraska.....	1,700,000	1,735,232
Wisconsin.....	1,400,000	1,362,785
N. E. States and Territories.....	900,000	969,557
Total acres.....	12,000,000	12,042,896

The prospective yield to be harvested from the 12,000,000 acres sown to spring wheat compared with the corresponding crop of spring wheat last year is indicated by the following figures:

	Estimated, 1886.	Crop, 1885.
Minnesota.....	30,000,000	34,235,000
Iowa.....	29,000,000	30,332,000
Dakota.....	32,000,000	27,912,000
Nebraska.....	18,000,000	19,828,000
Wisconsin.....	16,000,000	15,665,000
N. E. States and Territories.....	15,000,000	17,275,000
Total, bushels.....	140,000,000	145,298,000

This estimate gives the 1885 crop a plus of 5,298,000 bushels over this year's spring wheat crop, the largest portion of the decrease falling to Minnesota, while Dakota promises a considerable increase in yield, in accordance with the increased acreage.

If we add the spring wheat figures to those for the winter wheat crop, the total acreage and yield of the wheat crops in the United States for 1886 and 1885 are as follows:

	Crop.		Acreage.	
	1886.	1885.	1886.	1885.
Winter.....	29,000,000	211,814,000	24,725,000	22,146,350
Spring.....	140,000,000	145,298,000	12,000,000	12,042,896
Total.....	435,000,000	357,112,000	36,725,000	34,189,246

These figures give this year's total wheat crop a plus of 77,888,000 bushels, while the acreage sown to wheat would be 2,555,754 acres in excess of that harvested last year.

EXPORTS OF BREADSTUFFS.

The total values of the exports of domestic breadstuffs during the month of June, 1886, and during the six and twelve months ending June 30, 1886, as compared with similar exports during the corresponding periods of the preceding year, were as follows: June, 1886, \$13,702,993; June, 1885, \$9,024,530; six months ended June 30, 1886, \$69,861,566; same period 1885, \$76,751,324; twelve months ended June 30, 1886, \$122,800,379; same period 1885, \$156,451,831.

REVIEW OF THE CHICAGO MARKET.

Wednesday, July 7, the price of August wheat in this market touched 83 $\frac{1}{4}$ c., the highest point reached for a nearby option since early March, when May wheat was quoted at 86c. About six weeks ago the price was pushed up to 79 $\frac{1}{2}$ c. by manipulation, but the artificial character of the advance was patent, and the general public refused to lend the boom or the boomers any assistance, and the bulge was followed by a collapse, that carried prices back to within a fraction of the lowest level that had previously marked low tide. The market swung in a disheartened fashion between 73 $\frac{1}{2}$ c. and 75 $\frac{1}{2}$ c. for August delivery, through the whole of the latter part of June, and turned into July without the faintest sign of improvement. For weeks reports had been current of damage to crops in various parts of the world, but the trade paid little attention to them, and the tone of the British markets continued depressed to an extraordinary degree, with offerings of cheap India and California wheat pressing for sale in seemingly inexhaustible quantities. The American crop promised well, and assurances were given in the official crop reports and private estimates that the total yield would be 100,000,000 bushels greater than in 1885, when only 350,000,000 bushels all told were produced on American soil, Canada not included.

At the very moment when the outlook seemed gloomiest there came a sudden awakening to a realization that our spring wheat crop had been seriously damaged by drought, and that instead of universal abundance there might be a season of comparative light supplies. The price of August wheat shot up to 83 $\frac{1}{4}$ c., but three days after the culmination of the bulge the price was 6c. off. General outside and clique buying carried values up again nearly to the top, and our markets have been excited and nervous, with an unquestionably strong undertone, until very lately. The government estimates for June gave 98 as the average condition of spring wheat on the 1st of the month. On the 2d of July the McCormick Harvester estimates brought the average down to 85, and eight days later the government figures reduced it another 2 points. Advices from all portions of the Northwest since July 1 would seem to indicate that very great additional damage has been done to the crops, and that the condition has been running down continuously. Commission merchants in the grain trade have by tacitly mutual consent reduced the average to between 60 and 65 per cent., and many extremists predict, with every show of confidence, that there will not be more than a half an average yield of spring wheat, or 75,000,000 bushels. Making the usual allowances for exaggeration and panic estimates, it is reasonably safe to say that not more than 112,000,000 bushels of spring wheat will be raised this year.

The rapid advance consequent upon the sudden popular realization that there was going to be a second short crop of American wheat has proved sufficient to check the export movement of breadstuffs. Foreign markets have stubbornly refused to follow the speculative advance on this side of the Atlantic, though during the last few days private advices have indicated a gradual hardening of values abroad, and foreign grain speculators have been covering short contracts at a loss. English importers have also been reluctantly advancing their limits, though very little new business is actually passing. The most encouraging symptom, however, is found in the fact that the demand for the lower grades of wheat has been so active that the advance in quotations has quite kept pace with enhancement of speculative values, showing that the market has both breadth and bottom. Whether it also has staying qualities remains to be seen.

In the southern districts the winter wheat harvest was two weeks earlier than usual, and under the stimulus of higher prices the early run of grain promises to be remarkably heavy—a circumstance which may exert an exceedingly depressing influence on values in the near future. The first effect of the heavy receipts of new wheat and the stoppage of export shipment was seen last week in an increase in the visible supply of 348,000 bushels, the turn in the tide having set in two weeks earlier than usual. Last year the visible supply did not begin to increase until the last week in July. Stocks are less than they were at the corresponding date last year by about 12,000,000 bushels, and since the 1st of January they have been reduced more than 30,000,000. It is not probable that our warehouses will be distended with enormous stocks again this year, but supplies are not li-

able to get down to a famine level and the ever present certainty that there will be enough to go around to-morrow, next week, next month and next spring will be a healthy restraint to extremists on the bull side who would like to see the prices of breadstuffs go kiting skyward.

Speculation in wheat during the last half of the month under review has been very heavy and the range in prices has been 71 $\frac{1}{4}$ c. to 81c. for cash No. 2 spring; 72 $\frac{1}{2}$ c. to 82c. for July; 74 $\frac{1}{2}$ c. to 83 $\frac{1}{4}$ c. for August and 74 $\frac{1}{2}$ c. to 86 $\frac{1}{4}$ c. for September. The activity has been concentrated within the last two weeks, and the range, as will be seen above, has been about 10c., with sharp minor fluctuations. The appended tables will show the movement and position of wheat and other grain, with useful and interesting comparisons.

Receipts of corn at this and other points have been liberal and the late movement shows an increase. The arrival of some corn at Liverpool out of condition six weeks or so ago checked the export movement, but confidence has since been restored and the outflow has been resumed. The weather conditions have affected the market value of corn as well as wheat, but to a less marked degree, and more recent quotations show an appreciable depreciation in prices. The extreme range for the past four weeks was: 33 $\frac{3}{4}$ to 37 $\frac{1}{4}$ c. for cash; 34 $\frac{1}{2}$ to 37 $\frac{1}{4}$ c. for July; 36 to 40 $\frac{1}{2}$ c. for August and 36 $\frac{1}{2}$ to 41 $\frac{1}{2}$ c. for September. A loss of about 2c. from the best prices realized is noted. The prospects for an average yield of corn are good, but a continuation of dry weather may yet do some injury.

The range in the price of cash sales has been: 27 to 32 $\frac{3}{4}$ c.; July, 27 $\frac{1}{2}$ to 32 $\frac{3}{4}$ c.; August, 25 $\frac{1}{2}$ to 31 $\frac{1}{4}$ c.; September, 25 $\frac{1}{2}$ to 31 $\frac{1}{4}$ c. Speculative and shipping inquiry has been good. The unwonted fluctuations in value has attracted the attention of many operators from wheat and corn to oats. Later transactions show a decline of 2 $\frac{1}{2}$ c. from extreme prices, and trade has assumed its customary tone of placidity.

The following table shows the receipts and shipments of flour and grain to and from this point from Jan. 1 to July 10, and for the corresponding period last year:

RECEIPTS.		SHIPMENTS.	
1886.	1885.	1886.	1885.
Flour, bbls., 1,748,676	3,435,889	Flour, bbls., 1,532,418	3,518,048
Wheat, bu., 2,775,693	10,631,786	Wheat, bu., 9,433,055	7,014,633
Corn, bu., 27,469,987	32,310,536	Corn, bu., 23,615,831	31,129,493
Oats, bu., 17,833,361	19,517,919	Oats, bu., 14,948,392	17,505,118

The following table shows the exports of breadstuffs from the principal Atlantic seaboard ports from Jan. 1 to July 10, inclusive, and for the corresponding period last year:

	1886	1885.
Flour, bbls.....	3,735,860	3,619,962
Wheat, bu.....	25,485,300	19,559,320
Corn, bu.....	41,237,800	37,870,721

The receipts of grain and flour at the principal Western points for the crop year beginning July 26, 1885, and ending July 9, 1886, and for the corresponding period the year previous, will be seen by the following:

	1885-6.	1884-5.
Flour, bbls.	9,701,336	8,263,899
Wheat, bu.	62,461,800	104,894,987
Corn, bu.	91,089,981	98,403,113
Oats, bu.	56,810,307	57,135,578
Rye, bu.	2,945,989	4,665,089
Barley, bu.	21,307,887	16,647,268

Total..... 234,615,961 281,146,035

The Chicago Board of Trade makes the following statement of visible stocks of grain in the United States and Canada, July 10:

	July 10, 1886.	July 3, 1886.	July 11, 1885.
Wheat, bu.	28,567,718	28,218,732	40,044,773
Corn, bu.	9,189,865	9,132,392	5,038,027
Oats, bu.	2,204,967	2,296,220	2,707,242
Rye, bu.	234,928	273,678	210,199
Barley, bu.	230,463	234,634	111,758

January 2, 1886, the record stood: Wheat, 58,432,990 bushels; corn, 7,950,543 bushels; oats, 2,609,625 bushels.

The grand total available supply of wheat July 3, 1886, and corresponding date last year, was as follows:

	1886, bu.	1885, bu.
Visible supply in the U. S.	28,218,732	41,600,303
and Canada, east of Rocky mountains	5,760,000	1,440,000
On passage—Wheat and flour for Cont. " for U. K.	18,800,000	20,400,000

	1885-6.	1884-5.	1883-4.
Total.....	52,778,732	63,440,303	63,440,303
June 26.....	52,843,687	64,492,524	64,492,524
June 19.....	57,308,761	62,908,026	62,908,026
June 12.....	60,838,681	64,717,070	64,717,070
June 5.....	61,225,519	66,230,432	66,230,432
May 29.....	59,368,667	67,146,877	67,146,877
May 22.....	61,024,315	68,901,814	68,901,814
May 15.....	61,510,501	73,961,932	73,961,932
May 8.....	62,536,898	71,392,878	71,392,878

The following return shows the extent of the imports of cereal produce into the United Kingdom during the first forty-two weeks of the season:

	1885-6.	1884-5.	1883-4.
Wheat.....	cwt. 49,064,719	43,757,348	40,823,634
Barley.....	4,118,840	14,335,299	13,069,683
Oats.....	8,631,981	10,233,963	9,759,385
Indian corn.....	23,640,187	21,665,036	21,775,819
Flour.....	11,488,561	14,050,222	12,327,904

THE AMERICAN ELEVATOR AND GRAIN TRADE.

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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

THE "DUMP" QUESTION.

There are no particular developments in regard to the grain dump matter to record this month, save the announcements made by some of our advertisers. Those who are now putting in dumps under the patents of J. M. Harper are W. G. Adams, of Sandwich, Ill., the Frost Manufacturing Co., of Galesburg, Ill., the Barnard & Leas Mfg. Co., of Moline, and the Link-Belt Machinery Co., of Chicago. The merits of the case aside, for we would not attempt to go into the intricacies of the dump patents, these firms have shown a commendable desire to protect their customers, which will no doubt bring its own reward.

THAT MUTUAL ELEVATOR COMPANY.

Mutual insurance companies of one kind and another have sliced off so much of the business of the old stock companies in the last six years that whether a new move in this direction is good, bad or indifferent, the insurance papers feel in duty bound to sneer and prophesy failure. They have been predicting the disastrous failure of the flour mill mutuals for, lo! these many years; and the flour mill companies still hold on to life and still flourish. The proposition to form a mutual elevator company of course was a good target for the insurance press, and the *Investigator* says:

At the recent convention of grain merchants held at Bloomington, Ill., it was decided to organize a mutual insurance company for the purpose of insuring elevators, and a committee was appointed to perfect the organization. Country elevators belong to a class of risks which have not been profitable to the companies insuring them. As a consequence rates have been stiffened up and the usual result follows: Somebody got mad and he is going to get up a mutual company. Well, let them try it. They will become tired too, after a while. The Mississippi Valley lumber merchants only about a year ago organized their mutuals to save the extortionate (?) rates charged by the stock companies. They had a fire at Muscatine the other day and they will probably have a few more, and then mutual insurance will play out. Business men must have insurance that insures if they have insurance at all. It takes them some time to find out the force of that simple truth, but find it out they will sooner or later.

It is true that rates on country elevators "have stiffened up," and all for the reason that the Bourbon stock companies adhere to their old maxim that an elevator is an elevator; and the rates on the whole class must be made to pay for the losses on the poor risks. It seems never to strike them that the rates need not be piled up if only a little discretion is used in taking risks. But the stock company plan of doing business through agencies really puts a premium

on accepting poor risks; and the good risks have to pay for it.

There is a mutual flour mill insurance company which for eleven years has insured flour mills at half stock company rates and accumulated a surplus of about \$200,000 into the bargain. This shows that there is big money in insuring flour mills at less than stock company rates, if only care is exercised in taking risks. If that mutual company had been as reckless as the stock companies are, it would have been hopelessly insolvent years ago.

Let the elevator men form their company on a conservative basis and make the character of their risks the first consideration. Of course good, paying elevators burn; but there are more of the other kind that offer a tempting bait to fire. If a company is formed of the proper material, we will venture to predict that it will be able to insure elevators at 50 per cent. of the stock company tariff.

ELEVATOR BARNs.

The vast change that has taken place in our farming operations in late years has necessitated a corresponding change in the means employed of successfully conducting a farmer's business. The great farms of the West and Northwest, the stock and dairy farms cannot be conducted on the same happy-go-lucky basis as an eighty acre patch. The big farmer must be a business man and pursue business methods.

Some of the barns on the big farms resemble elevators much more than the barns of olden time. Many of them have grain dumps, conveyors, elevators and fanning mills; in fact everything that will tend to lighten labor by requiring a minimum of hands, or render the final returns the largest. Many farmers imagine that a fanning mill, for instance, will only take out stuff that otherwise the grain man would pay for. This is fallacious. The grain man saves himself and the farmer makes money by taking the dirt out himself rather than by letting the elevator man dock him for it.

All such machinery as dumps, fanning mills, etc., are a positive gain to the farmer both in time and money, and we are glad to see that the better class of farmers are so rapidly adopting such devices. Almost all the furnishers of elevator machinery have more or less trade with farmers of this class, and the trade appears to be growing rapidly.

THE ONLY PROPER APPROPRIATIONS.

The tone of the press of New York City is unmistakable on the question of river and harbor improvements. There is no end of sneering at the creeks and bayous of the West and South, and the Hennepin Canal comes in for an ample share of adverse argument and abuse. But there is one object for which the people and press of New York are entirely willing that the public money should be appropriated, and that, of course, is New York. Thus *Bradstreet's* says:

There are some much-needed appropriations embodied in the river and harbor bill, among them one of \$1,000,000 for the improvement of New York harbor. This is an appropriation not local in its nature but of national importance owing to the relation in which the metropolis stands to the country at large. The improvements which call for the appropriation are necessary and should be carried out speedily. It is unfortunate, however, that the appropriation forms part of an extravagant bill whose approval by the President is problematical. The incident is one of many which demonstrate the importance of giving the President a partial veto on appropriations, a power which the governors of several of the states exercise under the state constitutions. With this power as part of his constitutional authority the President would have a very effectual control over log-rolling tendencies in Congress.

Exactly. That is modest. New York City only wants a twelfth part of the whole lump. Of course "this is an appropriation not local in its nature;" but by the same course of reasoning what appropriation is "local in its nature" when the relations of one part of the country to another are taken into account? This is exactly

the argument used on behalf of the Hennepin Canal, which the Eastern papers so roundly denounce. The state of Illinois has met the government more than half way in the work of connecting the Mississippi with the great lakes; but the Eastern papers still insist that the Hennepin Canal is a Chicago enterprise. On the basis of giving New York \$1,000,000 for improvements in her harbor, Chicago is willing to take what her commerce would relatively entitle her to, and build the Hennepin Canal out of that in a few years. Undoubtedly the President would pass on New York items and veto items in the bill for other parts of the country. But the President has never been South or West, and the chances are that he is more alive to the interests and needs of his own state than to those of other states. But in that he is only the same as nearly all Eastern men who have a limited acquaintance with the West and other parts of the Union. There are hundreds of Eastern people who derive their views of the West from Buffalo Bill's entertainments.

THE ELEVATOR STORAGE QUESTION.

A few years ago Chicago was accustomed to boast that among many other great institutions she had the "biggest" grain elevators in the country. So far as the structures might be considered the fact was really so, but when people come to boasting there is always a danger that vaulting ambition shall o'erleap itself. It has been somewhat in this way with the elevator men, many of whom are known to be interested in the transportation companies which bring the grain to our city or carry it hence to exporting points at the East.

Their mistake was this: They charged such a tariff for the necessary storage that when the grain reached the Atlantic seaboard it was burdened with an expense which made it difficult or impossible to compete with products from other directions, or else left the grain-grower of the Northwest out of pocket. However speculators may gamble on the Board of Trade, or in the Exchange at New York, it is certain that the tiller of the soil and his help must live, and the burdening of this great staple with onerous charges for the benefit of city capitalists or speculators, is simply a treason to the most vital interests of the community, and to the most numerous body of its actual producers. It is an error which must inevitably react to the loss and detriment of those who would be guilty of it.

We can therefore congratulate the elevator men that they have come to a rightful sense of the situation. The reduction in their charges, which we report in another column, will give a stimulus and encouragement to those engaged in the growing of this staple. Half a cent per bushel of a reduction may possibly make the dividends of the elevator stockholders a trifle smaller—though we hardly think so—but it is an all-important item to the cultivators of our broad fields, and may serve them to such purpose as that these Northwestern states shall maintain their reputation as the granary of the world.

It is also worthy to remember that by such wise concessions Chicago, as a distributing point, can much more securely hold her own. The badinage in which we sometimes indulge about certain cities to the south of us may be very pleasing to local pride, but the country is now being cobwebbed with railroads and the railroad center which is most liberal in its dealings, and most accommodating to shippers—even were it a baby compared with stout Chicago—will assuredly take the cake in the estimation of Western grain growers.

An invention which evidently has come to stay is the Improved Scale Beams, by which an undetected error in weighing is next to impossible. It is being adopted in old elevators as well as new ones, and is indorsed by everybody as extremely simple and common-sense-like. When getting your new scales you might as well get the check beams with them.

Editorial Mention.

If you are in need of scales, note the card of Jones of Binghamton. "Jones he pays the freight."

SENATOR MILLER, of New York, deserves well of the Northwest. He voted for and spoke for the Hennepin Canal.

THE Minnesota State Board of Railroad Commissioners seems to be getting down to business in regulating rates on the roads of that state.

A PETITION is being circulated in Barnes county, Dak., asking the Northern Pacific R. R. to reduce the rates of freight for the transportation of grain.

S. SELLER & SON, Duncannon, Pa., write: "We would not be without the AMERICAN ELEVATOR AND GRAIN TRADE if it cost twice its present price."

A NUMBER of unusually interesting articles appear in this issue. We think the entire paper will well repay a careful perusal, "if we do say it as hadn't order."

THE Lieutenant-Governor of the great state of New York is among our advertisers in this issue. We refer to "Jones of Binghamton." Everybody has heard of him.

GEO. U. PORTER, editor and proprietor of our esteemed contemporary, the *Baltimore Journal of Commerce*, died suddenly on July 5, in the 65th year of his age.

Two hundred Iowa grain dealers met at Des Moines last Tuesday. They agreed that the corn could stand ten days more of dry weather without suffering materially.

THE grain dealers of New England have organized an association, their principal object being to protect themselves against alleged short weights from Western shippers.

THE Dakota Farmers' Territorial Alliance, at its recent meeting at Aberdeen, took ground in favor of a railroad commission with large powers to regulate freights, elected by the people.

THE estimate given for the winter wheat states by Prime aggregates 280,000,000 bushels. Of the Central states Indiana and Ohio lead with 34,000,000 and 33,000,000 bushels respectively.

THE wheat crop of Great Britain is reported on good authority to be 18 per cent. short of an average. France will have to import nearly 90,000,000 bushels of wheat to piece out her own crop.

ONE Chicago gentleman who has been on the Board for years, has failed four times, paying dollar for dollar each time. The last bulge on wheat laid him out again, and he announces that he is through with grain dealing forever. He is disgusted.

NOTWITHSTANDING the prevailing dullness in elevator building circles, the Frost Mfg. Co., of Galesburg, Ill., reports the total of their sales up to July 1 as fully up to the sales recorded at the same date last year. Inquiries from new territory are coming in almost daily at headquarters in Galesburg, and the Frost Company attributes this to their advertisement in the AMERICAN ELEVATOR AND GRAIN TRADE. Knowing that this firm manufactures none but first-class goods,

we can recommend them to grain men throughout the West, and wish the energetic managers of the concern continued success and all the prosperity they so richly deserve.

IT is rumored that St. Louis speculators have lost \$2,000,000 by the recent squeeze in wheat at Chicago. A Chicago "squeeze" is apt to hurt somebody, even though he be from the great city at the other end of the bridge.

THAT was a startling rumor from St. Paul last week that the "Minneapolis crowd" had dropped \$4,500,000 in wheat. Nearly all the prominent millers and Mike Doran and P. H. Kelly were said to be among the losers. There was but little foundation for the report.

SOME of the California papers are charging that the prison-made bags are not properly put upon the market, but are virtually made to subserve the purposes of the bag speculators, a pestiferous class of forestallers which have fastened themselves on the producers of that state.

THE AMERICAN ELEVATOR AND GRAIN TRADE starts in on its fifth year with this number. We have endeavored to keep up with the procession, and that we have succeeded in some measure is attested by our large list of regular paid subscribers. If we have had shortcomings we will amply atone for them in the future.

AHA! we told you so. Consul General Raines, at Berlin, writes the State Department that notwithstanding the exclusion of American pork, trichinosis is as prevalent in Germany now as it was when American hogs were allowed to be imported into that country. The American hog should demand his rights and a passport.

ELEVATOR men will notice the advertisement of H. Sandmeyer & Co., of Peoria, Ill., in regard to their Flexible Grain Spout. This is a valuable device for trimming cars, as the cars can be loaded without shoveling, and is especially adapted to elevators when there is little fall from the bin, as is the case with the great majority of houses.

ONE thing that is not known is how much money the foreigners have made out of wheat in this country in the past two years. They have persistently sold short, and have almost always come out ahead. They must have carried millions of good old American money out of our borders. We need a protective tariff against these foreign gamblers.

FOR "nerve," otherwise known as "gall," E. L. Dwyer, of this city, is entitled to the ribbon. He bought 1,100,000 bushels of wheat on a cash capital of \$50. The parties that sold it were victimized to the extent of \$40,000, and that was not all; much of the stuff was sold him after hours, and the parties who thus violated the Board rule were disciplined.

WESTERN shippers have complained that Chicago inspection of corn was too strict, and last winter it was relaxed. And now grain receivers in this city are howling on account of the lax inspection, which makes corn relatively cheaper here than in New York. They claim, with a good deal of truth, that lax inspection is not to anybody's interest in the long run.

EXCESSIVE estimates having been made from the last crop report of the Department of Agriculture at Washington as to the shrinkage of the wheat crop during the month of June, Prof. Dodge computes that this loss can not have been more than 6,000,000 bushels on the spring wheat crop. On the first day of last July the average condition of the crop was 96, falling to 86 at the time of harvest. This is only three points higher than the condition on July 1 last, representing the above loss when compared with the result of

last year's harvest. The damage to winter wheat in June being put at 5,000,000 bushels, the total loss on the wheat crop during that month would aggregate but 11,000,000 bushels.

ONE of the best-known separators sold, though comparatively new, is the "Dustless," made by Messrs. Johnson & Field, of Racine, Wis. It is in use in a large number of mills and elevators and is sold at a very reasonable price. It can also be used as a grader. Messrs. Johnson & Field will be pleased to send circulars and testimonials to parties needing such a machine.

READ the speech of Hon. Shelby M. Cullom on the Hennepin Canal. Senator Cullom has devoted much of his time for years to the question of transportation, and may well be called an authority on that subject. A desire to be fair is always manifest in his public utterances; and while he is a champion of the interests of the people, he does not stoop to the cheap clap-trap of the demagogue.

WE have received from A. C. McClurg & Co., of this city, a copy of Poor's Directory of Railway Officials and Directors, a new work which will hereafter be issued annually in March. It is a vast compilation of information respecting the officials and directors of all the railroads in the United States, Canada, Mexico, Central America, South America, Great Britain, and Ireland. It also contains a list of officials of organization auxiliary to railways, such as fast freight lines, steamboat companies; besides lists of officials of leading exchanges and commercial associations of industrial establishments such as rail mills, locomotive and car works, etc. The value of the work will be apparent. The price of the work is \$2.00 per copy, postpaid. A supplement containing additions and changes will be published quarterly and sent to each subscriber free of charge.

IN regard to the average yield of wheat per acre in various wheat-growing countries of this globe, Dr. J. H. Gilbert publishes in *Bell's Messenger*, an English agricultural paper, the following results of his researches, some of which are based on only one year's observations. The highest average yield is shown by the United Kingdom, viz., 28 bushels; next comes Denmark, with 25.7 bushels (based on two years' observation); Wurtemberg, from six years' observation, shows an average yield of 25.3 bushels; Holland, 23.4; Norway, with three years' observation, 23; Belgium, 22.7; Austria, with nine years' observation, 16; France, 16; United States, 11.9; Australia, 10.8. The following figures are based on a single year's average: Spain, 23.3; Sweden, 19.8; Prussia, 17.1; Egypt, 16.4; India, 14; Canada, 13.8; Hungary, 13.1; Russia, 5.5. The average yield for Russia is apparently given too low. Dr. Broch puts it at 9 bushels (in a French statistical journal), which is likely to be nearer the mark.

EXTREMELY low wages for agricultural labor, cheap railroad and canal transportation in India undoubtedly give wheat raisers in that country great advantages over those in the United States. Yet the methods of cultivating and preparing wheat for the market are so very primitive in India that her wheat will never displace American wheat to a greater extent than it has done so far, until now methods prevail and better wheat can be grown there. Indian wheat is very coarse and gritty, resembling rice in many respects. The flour made from it has a yellow appearance, and the bread made out of this flour resembles corn bread, but has not more than from 75 to 80 per cent. of its nutrition. To make it more salable, it is mixed with American or Russian wheat, and even this mixture gives a poorer quality of bread than either American or Russian straight. These being undeniable facts, it can readily be understood that American wheat will hold its place in the foreign markets, notwithstanding the croaking of pessimists to the contrary.

MARINE.

Lake freights are steady at 2½ cents for wheat and 2¼ cents for corn to Buffalo. A fair demand for room exists.

There is a considerable falling off in wheat exports for 1886, which is partially attributable to the reduced crop of 1885, and the lessened surplus available for export. The exports of corn, on the other hand, have so much increased that the total exports exceed those of the two preceding years.

Mr. Lon Moffat, of Detroit, Mich., recently was in this city to consult with vessel owners about organizing a mutual marine insurance company. Considering the action of the "hull pool" last spring in advancing insurance rates, and then driving competing companies off the lakes by a boycott system, it is safe to say that most of the vessel owners will favor the plan of mutual insurance.

The quantities of wheat and corn shipped from Baltimore, Md., from Jan. 1 to June 17 of the past four years is shown by the following figures:

	Wheat.	Corn.	Total bush.
1886.....	1,873,350	10,877,652	12,681,002
1885.....	2,717,462	9,675,939	12,393,401
1884.....	5,721,519	3,391,833	9,113,352
1883.....	5,193,908	7,583,667	12,777,575

Considerable improvements are constantly being made at the port of Duluth, Minn. But none are more marked than those of the Duluth Storage and Forwarding Company. They have built a dock 140x500 feet, and a warehouse that covers a space of 200x100 feet, and the company is contemplating other important additions. The Omaha road has contracted with them to do all its lake business. Another important factor in the development of Duluth is the large warehouses for the storage of flour during the winter.

The receipts of wheat in Buffalo, N. Y., for the month of June decreased by 64,374 bushels, when compared with the same month last year. There was a decrease in corn of 1,127,677. The receipts of oats increased by 349,169 bushels, and those of rye by 10,025 bushels. The total decrease for the month of June in all kinds of grain was 832,883 bushels. For the six months ended June 30, the receipts at the above port in all kinds of grain show an increase of 7,601,516 bushels, as compared with the receipts during the first six months of last year.

When Gen. Poe, in charge of the St. Mary's River improvements, recommended the appropriation of \$250,000 for beginning the construction of another set of locks at Sault Ste. Marie, his plans were to build them 700 feet long. The wonderful increase of traffic to Lake Superior has caused him to alter the specifications, and if Congress gives the full amount asked for he will at once begin work on a set of locks that will be 800 feet in length, and which will cost, complete, not far from \$1,250,000. When the new locks are ready for business they will furnish ample lockage facilities for vessels trading to Lake Superior for all time to come. The June report of traffic through the canal during that month shows a large excess over any previous month in its history. The locks were in use 683 out of the 720 hours. The passages through the old and new locks aggregated 1,162 vessels, of which 739 were steamers and 423 were sail craft. The aggregate registered tonnage was 672,008 tons, and the amount of freight transported was 668,417 tons. If four more vessels had passed through that month the passages would have averaged forty for each day. The registered tonnage exceeded that of the corresponding month last year by 191,676 tons and the freight tonnage by 156,167 tons. It exceeded that of any previous month in the canal's history by 121,043 tons and the freight tonnage by 157,179 tons. The whole business for June was greater than the traffic during the entire period of the first five years the canal was in operation. This statement alone ought to be sufficient argument to secure the appropriation asked for.

The passage of vessels from the lakes to the ocean which took its rise as early as 1844, and was more generally entered into in 1856 and subsequent years, did not at any time meet the expectations of those who made the venture. The causes might have been foreseen and were obvious for several reasons. In the first place vessel cargoes were limited in quantity, owing to the canals leading from the lakes to the ocean which would not admit the passage of vessels carrying beyond 20,000 bushels of grain and a like proportion of tonnage as regards other kinds of freight. To these difficulties may be added canal tolls and port charges, which were, to say the least, exorbitant. Why then, it may be asked, did so many venture in the undertaking? To this it may be briefly stated that during that period freights between New York and Liverpool commanded a higher figure than ever previously known, while on the other hand the lake marine was visited by depression equal to any that had ever taken place on fresh waters. This stagnation of business came on in 1858, and was overshadowed by those of previous years. A large number

of vessels were lying idle in nearly all the lake ports, while the few that were employed worked with the margin on the wrong side of the ledger. The vessels that went to sea were no longer required here, and the anticipation of disposing of them in foreign countries or finding employment in coasting while there, stimulated many owners to hazard the venture. While a few were successful in the latter move others were disappointed, and it may be added that from first to last, the lake and ocean trade never proved a success.—*Marine Record.*

The St. Lawrence River route, the Erie Canal route, and the different through railway lines between the Western grain producing districts and the Eastern seaboard markets will hereafter be in active competition against each other for the great volume of the carrying trade to which we have been referring, and the transportation route that can offer the greatest advantages to all parties interested must be able in the end to secure the largest share of this enormous and rapidly increasing trade. It is likely that the locks on the Welland Canal will be deepened in the not distant future, and the locks on the short canals at the different rapids of the St. Lawrence made to correspond so as to admit the passage of good-sized sea-going vessels. The New York men will find some means of enlarging the Erie Canal, and the two water routes are likely to make a long and earnest fight for the lion's share out of this enormously heavy carrying trade.—*Drovers' Journal.*



Senators Logan and Cullom have succeeded in the Senate in getting an appropriation of \$300,000 for the Hennepin Canal scheme, and a provision for the acceptance of the old canal into the river and harbor bill.

M. De Lesseps still sticks to his Panama Canal scheme. He thinks that a level canal could be completed in three years at a cost of \$120,000,000. Another Frenchman, M. Jacquier, advocates a canal with locks. But such a canal, says De Lesseps, would not be of any benefit, as it would ultimately have to be supplanted by a level canal. It is calculated that the annual receipts of the canal would be \$1,000,000, or at the rate of \$3 per ton.

A correspondent, writing from Panama, speaking of the extravagance of De Lesseps' engineers and followers, says that thus far \$3,000,000 has been spent in hospitals, \$5,000,000 on the village of Christophe Colon, beautiful enough in itself but not the canal, or contributing to the canal in any proportion to the sum expended. Further millions and millions of dollars have been expended on machinery, which is lying idle and exposed to the weather.

There will meet at Syracuse, on August 28, a convention which will have for its object the discussion and furthering of several measures designed to improve the New York state canals. The convention will resemble in many respects the conference which met at Utica last year, but it is hoped that the fruits will be more satisfactory. The almost total failure of canal legislation at Albany this session has only nerved the friends of the canals to greater efforts, and it is confidently thought that the agitation of the matter will be so thorough as to cause the legislature to make some provision leading to a general and far-reaching improvement of the state's waterways. Among other measures set down for discussion will be the Grain Elevator Charges bill, which has been so successfully opposed by the railroad influence each year. The question as to whether federal aid should be invoked is also to be discussed. The results of the convention, judging from the interest already excited, will not fail to be highly important.

The following is the Hennepin Canal amendment in the River and Harbor Bill, as passed by the Senate: The grant of the Illinois & Michigan Canal, its rights of way and all its appurtenances, and all right, title, and interest which the state of Illinois may have in any real estate heretofore ceded to the state of Illinois by the United States for canal purposes, made to the United States by an act of the General Assembly of the state of Illinois, approved April 28, 1882, be and is hereby accepted on the terms and conditions specified in the act of the General Assembly of the state of Illinois. For the construction of a canal from the Illinois River, at or near the town of Hennepin, in the state of Illinois, to the Mississippi River, at or above the mouth of Rock River, in said state, together with such feeders and other works as may be necessary to supply said canal with water, \$300,000. Said canal shall be known as the Illinois & Mississippi River Canal, and shall be constructed on such route as may be determined by the Secretary of War; provided, that it shall be the duty of the Secretary of War, in order to secure the right of way for such canal and feeders, to acquire the title to such lands as may be necessary by agreement, purchase, or voluntary conveyance from the owners, if it can be done on reasonable terms; but if that shall be found impracticable, then the Secretary of War shall apply at any term of the Circuit or District Court of the United States for the Northern District of Illinois to be held thereafter, at any general or special term held in said district, and in the name of the United

States institute and carry on proceedings to condemn such lands as may be necessary for right of way as aforesaid; and in such proceedings said court shall be governed by laws of the state of Illinois, so far as the same may be applicable to condemning private property for public use; provided, farther, that said canal shall be eighty feet wide at the water line and seven feet deep, with a capacity for vessels of at least 280 tons burden, with guard gates, waste weirs, locks, lock houses, basins, bridges, and all other erections and fixtures that may be necessary for safe and convenient navigation of said canal and branch, as specified in said survey.

Said the Erie canal boat captain: "There's five kinds of canal boats. First there comes the 'bullheads.' They are those big canal boats with a cabin over the whole deck. They won't carry any more dead weight than the others, but they are more roomy for light, bulky freight, because there is more room between the keel and deck. Then comes the 'lakers.' This is a 'laker,' lake boat, some calls them. They are the big boats with a cabin aft and a stable and bunks forward. Scows are canal boats with the whole deck open and covered with leanto hatches like hot houses, only there ain't no glass. They have a cabin aft and forward, too. They are the most profitable, because they load anything from coal to dry goods and fruit. The whole deck being open they load easy like. Then there are 'lemon squeezers,' them canal boats cut in two in the middle so as to make two short sections, so as to go easily into small locks on some of the canals. There are very few of them nowadays. The lumber boats are shallow and carry their loads mostly above deck. Some captains own only one boat, some two and some three. Two boats is the best. We tie them together. When a man has three boats he ties them all together. It takes two mules to pull one boat and three to pull two. They put six and eight on three boats." "Do all boats carry their own mules?"

"Mostly. You can hire them, though. Each canal boat has a stable forward with room for three mules. The hands have bunks abaft or under the stable." "How many men does it require to run a canal boat?" "Four to run a single boat and five on two boats; so you see where the economy of running two boats comes in. On a single boat there are two steerers and two drivers. The captain is one of the steerers. On two boats there are two steerers and two drivers beside the captain. Each steerer and driver works eight hours and their mules work the same watch. We have to pay steerers \$25 a month and drivers all the way from \$12 to \$20. We can get 'trippers'—those drivers who only go from Albany to Buffalo—for \$1 per day. You'd better believe it costs something to run a canal boat. Besides the wages for the two steerers and two drivers, there's the grub and the feeding and shoeing of the mules, the wharfage and the towing. It costs me from \$18 to \$20 every time we are towed down the river from Albany. These tugboats make up rafts of from forty to sixty boats and tax 'em all. Then these boats cost us about \$4,000 each, and the repairs amount to a good deal. There's the painting and the calking, and all winter long we don't make a cent. It takes ten days to make the run of 302 miles. We calculate to carry freight up to Buffalo and bring a load back about once a month, putting in six or seven round trips in a season. A boat like this will carry 8,000 bushels of wheat, 125 to 150 tons of merchandise and 175 tons of coal. The scow will carry more. We got five and one-half cents a bushel for our last load of 16,000 bushels in both boats. That comes to \$840. We are loading to carry back miscellaneous merchandise, and get sixty cents a hundred weight for it. A boat will clear all the way from \$2,000 to \$5,000 a season for the owner, and a good deal depends on the way the freight agent handles his end of the work. Quick cargoes and short waits bring in the money. Men that understand the business clear more on a couple of canal boats than the owners of a tugboat. A good many boats are owned by their captains, and some are owned by a couple of owners. There are big companies that own a hundred or more boats. Some of the boats carry steam, but steam isn't enough faster on a canal to pay for itself. Mule power is good enough engines for me. When a steam canal boat gets stuck on the mud bottom there she is. Six good mules would yank her out. Then the engine and boiler take up lots of room and displace twenty or thirty tons of freight, and it takes just as many hands to run them."—*Brooklyn Eagle.*

THE DIFFERENCE.

JULY.

Mr. Champignon—"In making out your invitations, my dear, don't forget Mr. Corncomer. He is an immensely successful and highly honorable member of the Board of Trade. Why, they say he cleared a cool hundred thousand last week.

Mrs. Champignon—"Certainly; we must have him by all means. We all like him so much."

DECEMBER.

Mrs. Champignon—"Isn't that young Corncomer coming up the street?"

Mr. Champignon—"Yes; don't recognize him. He lost fifty thousand on the Board last week. This speculating is nothing but gambling, anyway."—*Rambler.*

THE BASTING THREADS.

She was eating green corn from the cob, when her teeth became entangled with a corn silk. "Oh, dear," she said, "I wish when they make corn they would pull out the basting threads."—*Prairie Farmer.*

ELEVATOR AND GRAIN NEWS

Dell Rapids, Dak., is to have an elevator.

A large elevator is to be erected at Freeman, Dak.

A 25,500 bushel elevator is to be built at Neligh, Neb.

A large elevator is to be built at Belmont, Wash. Ter.

Hart & Sexton will build a grain elevator at Leona, Ill.

A farmers' elevator is to be built at Mt. Vernon, Dak.

No. 1 wheat is worth 60 cents a bushel at Mankato, Minn.

Farmers of Clarkfield, Minn., will build a flat warehouse.

A grain elevator is to be built for George Lovering at Newton, Ill.

A stock company will build a large elevator at Belle Plaine, Iowa.

Harvey & Rifner have sold their elevator at Mount Summit, Ind.

Fernding & Snyder, grain dealers, Brookville, Ohio, have sold out.

H. & W. Gieschan, grain dealers, San Francisco, Cal., have dissolved.

Skelton, Fish & Hill, grain dealers, Monroeville, Ohio, have dissolved.

Bagley & Cargill will build a \$10,000 elevator at Minneapolis, Minn.

Foot & Co.'s bucket shop, at 40 Broadway, New York City, has failed.

The first new wheat that arrived in Dallas, Tex., sold at \$1 per bushel.

Another large elevator will probably be erected at Jamestown, Kan.

H. S. Haynes succeeds Haynes & Co., grain dealers, Colorado Springs, Col.

Kendall & Smith, grain dealers, have sold out their branch at Sault Ste. Marie, Neb.

An elevator with a capacity of 10,000 bushels is being built at Mankato, Minn.

The combined capacity of the elevators at Aberdeen, Dak., is 108,000 bushels.

D. W. Storms & Co., grain commission merchants, of this city, have dissolved.

Morse, Ward & Co., grain commission merchants, Chicago, Ill., have dissolved.

A \$35,000 brewery will be built at Nos. 47-51 South Green street, Chicago, Ill.

Putnam & Co. are putting up an elevator at Andover, Dak., the fourth at that place.

C. S. Lee succeeds Lee & Christie, grain commission merchants, at Kansas City, Mo.

A 60,000-bushel elevator is being built by the Oswego (Kan.) roller mill at that place.

The Frost Mfg. Co., Galesburg, Ill., has a large order for machinery from Windfall, Ind.

A farmers' elevator and warehouse company is to be organized at Blue Earth City, Minn.

Ward Ames, of Fargo, Dak., will establish a grain commission house at Duluth, Minn.

The Frost Mfg. Co., Galesburg, Ill., has sold a complete horse power outfit to Ravenna, Neb.

The Minneapolis & St. Louis R. R. will build a 50,000-bushel elevator at Arlington, Minn.

Mr. Pearson is building an elevator in connection with his mill at Southampton, Ont., Canada.

The Canadian Pacific Railway will build a 25,000-bushel elevator at Toronto, Ont., Canada.

The Farmers' Alliance at Ipswich, Dak., will build a 25,000-bushel elevator, at a cost of \$4,000.

Moore, Sims & Co., millers and wholesale grain dealers, Atlanta, Ga., have dissolved partnership.

A 6,000-bushel elevator is to be erected at Brimfield, Ill. Messrs. Parry & Deal have the contract.

The Natchez Wharf and Elevator Company are building a three-story warehouse at Natchez, Miss.

George Ellison, a member of the Chicago Board of Trade, failed on July 7. He was short on oats.

About 6,000,000 feet of lumber will be used in the construction of the elevator at West Superior, Wis.

C. W. Swanson & Co. succeed Porter & Poley, the Hepburn Grain & Lumber Co., Hepburn, Iowa.

The Frost Mfg. Co., Galesburg, Ill., reports the sale of a large quantity of machinery to Kearney, Neb.

Eakin, Cheek & Co., Chattanooga, Tenn., have let the contract to build their grain elevator to J. L. Almet.

A complete horse power outfit has been sold by the Frost Mfg. Co., Galesburg, Ill., to Spirit Lake, Iowa.

The Norfolk & Western Railroad will build a grain elevator in Norfolk harbor, Va., with a capacity of 125,000 bushels.

It is to be finished this fall and so arranged that the capacity can easily be doubled.

A 25-horse power boiler, complete, has been shipped by the Frost Mfg. Co., Galesburg, Ill., to Exeter, Neb.

A party of Parker, Dak., has ordered a large quantity of machinery from the Frost Mfg. Co., Galesburg, Ill.

A 30,000-bushel elevator is being built at Peninsula, Ohio, in connection with Moody & Thomas' Mill.

The Newton (Kan.) Mill and Elevator Company is going to build a 10,000 bushel elevator at the above place.

A complete elevator outfit has been furnished by the Frost Mfg. Co., Galesburg, Ill., to a Hastings (Neb.) firm.

W. Henry Graddy is near completing his steam grain elevator at Versailles, Ky., with a capacity of 80,000 bushels.

The Wagenhauser Brewery, Dallas, Tex., has been bought by Gannon Bros. for \$42,000, and will be put in operation.

The Frost Mfg. Co., Galesburg, Ill., has shipped to Monmouth, Ill., a 10-horse power engine with pulleys, belting, etc.

New England grain merchants have formed an organization for self-protection against alleged swindling of Western shippers.

A 25-horse power boiler and a 20-horse power engine has been sold by the Frost Mfg. Co., Galesburg, Ill., to a party at Halstead, Kan.

The building of a 20,000-bushel elevator at Hubbard, Minn., is being contemplated by M. Stewart, Jr., in connection with the new flour mill.

Elevator "A" at Terre Haute, Ind., which has been running very steadily this summer, a fortnight ago shut down for a few days for repairs.

J. B. Lewis & Co., grain commission merchants at St. Louis, Mo., have suspended owing to the recent advance in wheat. Liabilities not known.

Walker & Harper's elevator, at Norway, Ont., Canada, is being rapidly pushed to completion, and will be ready for the storage of grain by next fall.

The Frost Mfg. Co., Galesburg, Ill., has recently sold two 25-horse power boilers with engine, pulleys, shafting, etc., to a party at Omaha, Neb.

The Mutchner & Higgins Co. has been incorporated at Indianapolis, Ind., to do a milling and grain dealing business, with a capital stock of \$50,000.

The Hudson Bay Company is erecting a 60,000-bushel elevator in connection with its mill at Winnipeg, Man. This is the fourth elevator built in that city.

Turner & Bellamy, of Nashua, Iowa, who failed on May 25, have been succeeded in the ownership of their elevators by Foss, Strong & Co., of Chicago, Ill.

The Frost Mfg. Co., Galesburg, Ill., has furnished an outfit, consisting of two 25-horse power boilers, with engines, pulleys, shafting, etc., to Tekamah, Neb.

Work has commenced on the new brewery of J. P. Dostal at Aurora, Ill. It will be 60x154 feet and four stories high. The total cost is estimated at \$75,000.

The Frost Mfg. Co., Galesburg, Ill., has received during the past month a large number of small orders for supplies and repairs, embracing every Western state.

One hundred farmers living near Dakota City, Dak., will contribute \$100 each toward building a large warehouse at the above place, and will compete for the grain trade.

The Frost Mfg. Co., Galesburg, Ill., is putting in a 30-horse power engine and a 35-horse power boiler for Tomkins, Duncan & Co., Phillips, Neb., in their new mill.

Mead, Neb., has three large elevators, two of which were built last year. It is said that more grain is being shipped from Mead than from any other town of its size in the state.

Webb M. Samuel has purchased for a syndicate a controlling interest in the Central Elevators at St. Louis, Mo., and will assume the Presidency of the corporation; N. G. Larrimore retiring.

The New Albany Brewing Company at Indianapolis, Ind., was incorporated on June 23, with a capital stock of \$15,000. Julius Gebhart, Chas. Bengel and Hermann Kirchhoff are the directors.

The Co-operative Brewing and Malting Company has been incorporated at Chicago, Ill., with a capital stock of \$250,000. James Turner, Solomon Stein and Samuel Schonehamer are the incorporators.

The recent rapid advance in wheat on the Chicago Board of Trade caused the suspension of John M. Rumsey, an old member of the Board; but he stated that he would pay 100 cents on the dollar.

The National Grain Transfer and Weighing Company at Chicago, Ill., has been incorporated with a capital stock of \$500,000. Edward Wynn, Henry L. Detrick and George S. Sloan are the incorporators.

C. W. Seefield, of Utica, Minn., will build a new engine house, 24x29, putting in a large engine, and will make of his elevator a general cleaning house, to begin work as soon as the new crop comes in.

August Schiffer, whose arrest in California and return to Joliet, we report in another place, settled at Monee, Ill., about 20 years ago, and engaged in the grain business. He enjoyed the full confidence of the community, was made treasurer of the school fund, and many intrusted considerable money to his care. When one year ago he failed, all the money intrusted to him was lost;

besides he was delinquent between \$3,000 and \$4,000 in the school fund. Hence his indictment and conviction for embezzlement. His wife is a sister of Carl Schurz.

The first car of new wheat was received at Chicago, Ill., by Culver & Co., on June 29. It came from Carbondale, Ill., graded No. 3 red, and sold at 71 cents free on board. Last year the first arrival of wheat was on July 21.

The St. Louis elevators have reduced storage charges on wheat, oats and rye to one cent per bushel for the first ten days. The same rate will be charged for corn after July 31. These rates are $\frac{1}{4}$ c higher than those charged by Chicago elevators.

The Dakota Territorial Farmers' Alliance, at their convention in Aberdeen, Dak., on July 7, adopted a resolution favoring the appointment of Territorial Railway Commissioners, "who shall have full power to fix maximum rates of fare and freights."

Dallas, Tex., is said to be greatly in need of a grain elevator. Col. I. T. Pryor of Austin, Tex., has looked over the field and expressed his willingness to erect an elevator at Dallas, provided a more thorough investigation predicts success to the enterprise.

The receipts of flour and grain in this city the past six months aggregated 57,593,000 bushels, against 78,895,000 bushels the same period last year. The shipments this year were 56,865,000 bushels, against 69,912,000 bushels for the corresponding period last year.

The Kansas Grain and Live Stock Company, of Hutchinson, Kan., has bought the elevators of the Mulkey Grain Company at Hutchinson, McPherson, Windom, Conway and Sterling. This gives them a line of twenty-three elevators on the line of the Atchison, Topeka & Santa Fe R. R.

Returns received from 780 correspondents, representing 622 townships in Michigan, give the area of the wheat crop in that State for 1886 as 1,600,784 acres, to which area the final corrections will probably add 25,000 acres. The estimated average yield is 13 and 68-100 bushels to the acre, indicating a probable total yield of 22,239,684 bushels, against 29,927,543 bushels last year, raised on 1,497,470 acres. The quantity of wheat reported marketed last June, in Michigan, was 430,676 bushels, and for the eleven months ended June 30, 14,044,903 bushels, or about 46 per cent. of the 1885 crop. The number of bushels marketed in 1884-5 was 8,468,513, or 33 per cent. of the 1884 crop. About 2,732,000 bushels of the 1885 wheat crop is still in the farmers' hands.

THE EXCHANGES.

Chicago Board of Trade memberships are quoted at \$2,200, with few in the market.

Tickets of membership to the New York Produce Exchange have ruled quiet at \$2,650.

During the months of July and August there are no sessions on the Chicago Board of Trade after 1 o'clock P. M.

The Toronto (Ont.) Board of Trade has a membership of 912, while the total memberships of all the other boards of trade in Canada, including Montreal, is but 986.

The Minneapolis Chamber of Commerce has appointed a committee to act with the millers' committee in petitioning the State Board of Grain Inspection for a revision of the inspection rules. The general sentiment is said to have been favorable to the addition of another grade, viz., No. 2 hard, to include the best varieties of No. 1 Northern.

As the reduced rates on grain storage in the Chicago elevators went into effect on July 1, the directors of the Board of Trade have decided that all contracts made previously to that date shall be delivered on the storage rates in force at the time the contract was made, and shall be known as "old style" trades, while all contracts made after July 1 shall be known as "new style" trades, and are deliverable on the $\frac{1}{4}$ -cent basis of storage.

The directors of the Chicago Board of Trade on July 1 resumed the fight with the Chamber of Commerce in regard to the rent question for the old exchange hall. They abide by their decision, made last April, not to pay any further rent for the hall until they are put in possession of a floor of offices to which they claim to be entitled under the terms of their lease. It is understood, however, that the question will be brought before the whole Board of Trade before suit is begun.

A meeting of the Toronto (Ont.) Board of Trade was held on June 29 to consider the gratuity scheme prepared by the council of the Board. By this scheme it is proposed to raise a fund, by making a certain assessment on each member of the Board, from which to pay a gratuity to the families of members who have died. The resolution was put by the president and seconded by several members, pointing out the advantages which other boards had derived from a similar plan of mutual life insurance. The resolution was finally carried unanimously, and the report of the committee adopted.

WHEAT AND FLOUR STOCKS.

The short crop of the cereal year 1881-82 left 19,400,000 bushels of wheat in sight on June 30, 1883—but 21,400,000 bushels as reported by *Bradstreet's*—while the quantity remaining in farmers' hands at that date is believed to have been very small, inasmuch as the quite high prices then prevalent failed to swell the receipts at primary markets. Most reports on this point place the invisible supplies of wheat on June 30, 1883, at but 13,000,000 bushels, although a few give them at 20,000,000. Accepting the latter, in this instance, the total surplus of wheat June 30, 1883, was 41,000,000 bushels. The following calculation is based on one presented a year ago:

	Wheat production, bushels.	Exports wheat and flour, bushels.
1882-83.....	*545,000,000	148,700,000
1883-84.....	420,000,000	107,400,000
1884-85.....	512,000,000	130,000,000
1885-86.....	357,000,000	*90,000,000
Totals.....	1,834,000,000	476,100,000

*504,000,000 bushels produced and 41,000,000 carried over on July 1. + Estimated.

The United States have exported in the four years ended July 1, 1886, 476,000,000 bushels of wheat and of flour reckoned as wheat, having produced (with reserves July 1, 1882) 1,834,000,000 bushels of wheat in that period. The demands for home consumption (for food, for the mechanical arts and for seed) have been placed at 1,290,000,000 bushels for the four years. There have thus been consumed of the total (here and abroad) 1,766,000,000 bushels, pointing to 68,000,000 bushels of wheat and flour (visible), including farmers' stocks of wheat, carried over on July 1, 1886, in the United States, on both coasts. Some authorities place the total carried over at 85,000,000 bushels. The 68,000,000 bushels, as arrived at, is undoubtedly a minimum result, is probably too low, although based on the official figures for production and exports and the much-indorsed 4.68 bushels of wheat per capita, in order to reach the annual consumption of wheat. The same calculation one year ago produced a surplus on July 1, 1885, of 115,000,000 bushels, which was unquestionably 35,000,000 bushels too small. In short, the invisible reserves have been continuously underestimated. The 115,000,000 bushels surplus on July 1 last year was undoubtedly nearer 150,000,000 bushels, and the 68,000,000 bushels (as above) is likely to amount to 90,000,000.

Of this 90,000,000 bushels 36,000,000 are reported to *Bradstreet's* as wheat in sight east of the Rocky Mountains, 6,000,000 on the Pacific coast, and about 5,000,000 in the shape of flour, both coasts, in all about 47,000,000 bushels in sight. This suggests that about 43,000,000 bushels are scattered over the agricultural regions back of primary markets, not an unusual quantity even after the short crop of last year.

The conspicuous feature in a review of this nature is found in the decline of 40,000,000 bushels in exports and of about 60,000,000 bushels of reserves on July 1 as against last year. This renders of special interest a comparison of United States and United Kingdom stocks of wheat and of flour at this time as compared with one year ago.

This exhibit constitutes a marked corroboration of late predictions as to the reduction of stocks of visible wheat and flour in the United States and the United Kingdom. On July 1, 1885, United States visible wheat (and flour as wheat) on both coasts had declined from 85,600,000 on Jan. 1 to 67,900,000 bushels, a loss of 17,700,000 bush-

	July 1, '86.	Jan. 1, '86.	July 1, '85.	Jan. 1, '85.
Wheat and flour stocks U. K.	*13,800,000	27,000,000	18,355,000	15,700,000
Wheat and flour for United Kingdom	18,800,000	14,300,000		16,300,000
Flour and flour for United Kingdom	1,800,000	1,000,000	23,050,000	1,500,000
Tot. British visible wheat and flour.	34,400,000	42,300,000	41,405,000	33,400,000
Visible wheat U. S. and Canada*	36,000,000	69,788,000	48,197,000	52,143,000
Visible flour U. S. and Canada*	5,400,000	8,870,000	9,525,000	7,050,000
Pac. visible wheat and flour**	6,400,000	26,785,000	10,233,000	26,420,000
Total amount visible wheat U. S. and Canada*	47,800,000	105,443,000	67,955,000	85,613,000
Total U. K. & Am. wheat and flour stocks**	82,300,000	147,643,000	109,360,000	119,013,000

*As estimated per advance reports. +*Bradstreet's*.

els only. This year the like reduction of stocks was from 105,400,000 bushels on Jan. 1, 1886, to 47,800,000 bushels on the 1st inst., a falling off of 58,000,000 bushels within six months.

In the United Kingdom the stocks, with quantities on passage thereto, have declined nearly 8,000,000 bushels thus far this year, as against an increase of 8,000,000 bushels in the first half of 1885. The combined stocks of wheat and flour in the United Kingdom and the United States as above show a decline of 10,000,000 bushels during the first half of 1885 (from 119,000,000 to 109,000,000 bushels) as compared with a decline of 65,400,000 bushels during the past six months. As explained above, these figures are based in small part on preliminary estimates, but are nevertheless approximately close to what must prove to be the final totals.

Late advices from the United Kingdom, India, France and Russia bring unfavorable tidings respecting the

prospect for the year's wheat harvest. And late reports as to the crop in the United States are much less favorable than previously anticipated. On all of these facts is based, in large part, the late advance in the price of wheat. Its failure to quote higher leve's, so far as may be learned, appears to be due to the moderate demand from the United Kingdom for wheat, on which, in the near future, prices are likely to depend.—*Bradstreet's*.

CHICAGO ELEVATOR CHARGES.

On June 24 the elevator owners of Chicago and Milwaukee announced the following schedule of storage rates to go into effect July 1:

On all grain received by us on and after July 1, 1886, and until further notice, the following rates of storage will be charged by us:

On all grain received in bulk and inspected in good condition, three-quarters ($\frac{3}{4}$) of one cent per bushel for the first ten days or part of same, and one-half ($\frac{1}{2}$) of one cent per bushel for each additional ten days or part of same, so long as it remains in good condition.

On and after the 15th day of November next upon grain in good condition storage will be at the foregoing rates until four (4) cents per bushel shall have accrued, after which no additional storage will be charged until the 15th day of April, 1887, so long as the grain remains in good condition.

On grain damp or liable to early damage, as indicated by its inspection when received, two (2) cents per bushel for the first ten days or part of same, and one-half ($\frac{1}{2}$) of one cent for each additional five days or part thereof. And upon such grain there will be no special rate for winter storage.

No grain will be received in store until it has been inspected and graded by authorized inspectors, unless by special agreement.

Since December last the bureau has been at work with the railroads and elevators with a view to reducing the expenses of handling grain at this market. The Eastern roads agreed in April last to abrogate their charge for sending cars to the elevators of Western roads when the Western roads would help them by shrinking their track service on cars an equivalent to 50 per cent., and when the elevators would forego their trimming charge of 50 cents per car and would make a corresponding reduction in their storage charges. It will be seen that all the reductions and reforms were contingent upon a reduction in elevator charges, and by the action of the elevators reducing their charges July 1, all the reductions are accomplished.

The following table will show the reduction in grain at this market:

Present expenses per car of 600 bushels—	
First ten days' storage, $\frac{1}{4}$ c. per bu	\$ 7.50
Trimming, when shipped East by rail per car .....	.50
Switching from elevator when shipped East by rail, per car	2.50
Total, per car	\$10.00
After July 1:	
Six hundred bu., first ten days' storage, $\frac{3}{4}$ c. per bu	\$4.50
Trimming	0.00
Switching	0.00
Total	\$4.50
Total saving	\$5.50

The reduction is equivalent to $\frac{1}{2}$ c. per bushel on lake grain, and 91-100c. per bushel on rail grain, or a total of 55 per cent. on present prices.

"I do not think the reduction will make a great deal of difference with Chicago's grain trade," said Mr. James Barrell, superintendent of Armour & Dole's elevators. "A great many persons have been complaining that a reduction was necessary; that grain was being carried around and past Chicago because our elevator charges were too high, and we decided to find out if a change would influence the business for the better. I do not see myself how it can do so."

Mr. Wheeler, of Munger, Wheeler & Co., said: "The reduction of storage charges is merely an experiment with us. Receivers of grain have contended for a long time that our charges have been too high, and that Chicago's grain trade was suffering heavily on our account. Our charges are as low as they are in Buffalo, where their elevator plants are greatly inferior to the Chicago plants. This talk about elevator charges injuring the grain trade is not in all respects truthful. Most people take into consideration that millions of bushels of grain are shipped direct from the grain districts to the seaboard without ever touching Chicago at all. The reduction of elevator charges will not, in my opinion, influence any business in this direction. But a majority of receivers seemed to believe that the reduction was necessary, and the majority rules."

Mr. W. T. Baker said emphatically: "The elevator people have not made reduction enough. Their charges have been exorbitant, more than for any other process of grain handling, and entirely out of proportion to the service they performed. They have reduced the cost of elevating and storing the grain for the first ten days from $1\frac{1}{4}$ cents per bushel to $\frac{3}{4}$ cent per bushel, but they have not made any reduction on the subsequent period of ten days. They allow the charge for those to remain $\frac{1}{2}$ cent each, when it ought not to be more than $\frac{1}{4}$ cent at the very utmost. I learned on the Board to-day that Milwaukee elevator men have reduced their charges to $\frac{1}{2}$ cent for the first and $\frac{1}{4}$ cent for the succeeding ten-day periods. Now, that's more reasonable, and there is no reason why the Chicago elevator men can not do the same. There is a lot of old wheat in the elevators yet, and I fancy they are keeping up the charges on that account."

GRAIN DELIVERY.

Says the New York *Commercial Bulletin*: The old proposition, that the railroads build and operate grain warehouses and give free storage, is again revived. The excessive charges Chicago warehousemen exact on grain, and the complaints consequent thereon, have clearly demonstrated the fact that the cost of handling is the coming question at the various ports. Whether or not the railroads ought to enter into the storage business and drive out the private owners is a question upon which there is not and never will be any unanimity of opinion. Besides, it should not be forgotten that we have terminal elevators with about six millions capacity, which are practically owned by the railroads now. We have private elevators, too, with about 15,000,000 capacity. There is little, if any, complaint among the trade as to cost of storage. The railroads, should they provide more warehouse room and bid for business, may give, of course, a cheaper rate. They may give "free storage," but it is feared that they might in so doing "rob Peter to pay Paul." In an editorial on "Grain Storage and Delivery," which appears in the *American Grocer*, a strong plea is made for railroad control. The *Grocer* believes that the question could easily be solved. It says:

"The only real question is how can this cheapening process be carried out with the least loss of revenue to the railway? We reply, by having each road deliver its grain as it does its merchandise, free of charge, within reasonable time. Of course this means the expenditure of money for grain elevators and storage warehouses; but the point is, that it would be the part of wisdom for the Western roads to do this rather than lose three times that sum by a wholesale cutting of the grain rate. Wheat must be gotten to the seaboard and to foreign markets more cheaply than now. That may be put down as an economic axiom. The easiest way to secure this result is to abolish such an exorbitant storage charge as 15 cents per bushel per annum."

It is probable that if this proposition were submitted to the grain trade as a body it would be rejected. They are content, on the whole, with present facilities. Chicago, it is admitted, badly needs a change. So do other ports. But New York at present does not ask that the private elevators shall be wiped out completely.

Edwin R. Livermore said: "I believe it is against the law for railroads to be warehousemen; but, of course, they practically do this. W. H. Vanderbilt owned personally the Central's Elevator, and a company headed by the late Jesse Hoyt owned the Erie Elevator. On the general question, I may say that if the railroads could own completely the elevators and make the charges less, it would be beneficial to the commerce of the port and state. There is, however, some danger and risk in giving the railroads this absolute power. If they chose, they could dictate terms. Besides, there is an obvious advantage in having the private elevators. Their representatives are on the floor; we come in contact with them always, and they are here ready to receive orders and directions for the delivery of the products of the West at all times. Then, we can also reach them better in every way, and there is, on the whole, the best of relations existing between them and their patrons. While, therefore, it might prove of service to the trade to have the railroads do the work, it would be a rather dangerous experiment."

NEW ENGLAND GRAIN MEN.

Grain men from the New England states held a meeting at Boston, Mass., on June 30, to protest against the alleged swindling practiced by Western shippers upon Eastern buyers, and to devise means and ways to remedy the evil. J. N. Victor, of Lawrence, Mass., was appointed chairman, and J. C. Harvey, of Lowell, Mass., Secretary. The towns represented by delegates were Athol, Haverhill, East Douglas, Billerica, Davenport, Marblehead, Newburyport, Rockland, North Leominster, Lowell, Ashburnham, Lawrence and Hudson, in Massachusetts; Pawtucket, R. I.; Portsmouth, Millford, and Dover in New Hampshire. About fifty letters had been received from parties who were prevented by business from attending the meeting. One of these, R. Thatcher, Albany, N. Y., sent a letter stating that there was an annual shortage in shipments of corn from the West of from 10,000 to 15,000 bushels, meaning a loss of from \$5,000 to \$7,000 to Eastern buyers. After a short discussion of the matter the meeting adopted a resolution urging the necessity of concerted action on the part of the Eastern grain men against the nefarious practice of Western shippers, and decided to form a permanent organization for their mutual protection against the encroachments practiced upon them. A committee was then appointed to draw up a constitution and by-laws to be reported at a future meeting.

There is a grain bag monopoly in San Francisco, and the following notice, sent out by an extensive grain dealer there, shows how it works: "Having learned that some farmers intend to put their new wheat into old sacks, I now give you notice that I shall accept new wheat only if in new sacks."

The elevators at Caryville, Downsville and Meridian all in Wisconsin, and at other points along the Milwaukee & St. Paul Road, are to be taken down and removed to points along the Fargo & Southern Road. The elevators belong to the Minnesota Elevator Company, and were constructed at a loss to the company.

THE LAW.

Right of Consignee to Sell.

Where advances are made by the consignee, a consignor can not direct a sale of the consignment at his pleasure. In the absence of agreement thereupon, the consignee has the right to sell at such time as he sees proper, to the extent of, and in payment of, his advances. —*Butterfield vs. Stephens, Supreme Court of Iowa.*

A Bucket Shop Decision.

Judge Mitchell, of Philadelphia, Pa., has rendered an important decision in the cases of a number of bucket shop proprietors, who had brought suit to restrain the removal of the "tickers." The judge held that, while the business of the complainants was not unlawful, the Philadelphia Local Telegraph Company was not obliged to furnish them quotations, except under voluntary contract. In reference to the removal of the "tickers," he decided that, if they were not used solely for furnishing the information specified in the bill, but were part of the general telegraphing apparatus, the plaintiffs had a right to their use for the latter purpose.

A Judgment Reversed.

The decision which was rendered in the case of West, Address & Co. against the Hide and Leather National Bank, both of Chicago, Ill., as reported in our last November issue, has just been reversed by the Appellate Court. The facts in the case were briefly as follows: On Aug. 8, West, Address & Co. sold 5,000 bushels of cash corn to G. B. Dickinson & Co., on the Board of Trade, and delivered two warehouse receipts for about 5,200 bushels, the purchasers paying by check on the Hide and Leather Bank. The warehouse receipts were bought by the bank from Dickinson & Co., who failed immediately afterward. The checks given to West, Address & Co. next day were thrown out of the clearing house for lack of funds, and the latter firm, learning that the bank had the warehouse receipts, demanded their return, which was refused. In the suit following, West, Address & Co. obtained a verdict of \$2,306 against the bank. But on appeal this judgment was reversed on the ground that it had not been shown by plaintiff that the bank knew anything of the ownership of the receipts, or that Dickinson & Co. were not bona fide purchasers.

Speculative Deals.

Judge Williamson, of this city, has rendered the following decision, which is of importance to commission men as well as "outside" speculators: W. P. Goebel, of Livingston, Ill., had been speculating in option deals, through the commission firm of A. B. McCourtie & Co., of this city. He also had engaged them to sell grain for him, shipped from Livingston, and it had been arranged to apply the proceeds from the grain on the speculative deals as margins, if necessary. The commission men carried a deal for Goebel, when the market was on the down grade. G. wrote the firm to sell when they could not hold any longer, as he did not want to pay any margins. On receiving the letter, the commission men sent G. a telegram saying they could not handle the deal without margins, and received an answer telling them to sell when they wanted to, as Goebel could not pay margins. They carried the wheat another day, and then sold at a further decline. As they attempted to deduct this loss from the grain sold, Goebel brought suit, and the judge held that the commission men should have closed out the deal on receipt of the letter, or at least after receiving the telegram. The loss was accordingly charged to McCourtie & Co.

Taxing Grain in Elevators.

The question of who is to pay the taxes that may be assessed on grain in store is about to be settled in court in this city. The firm of Munger, Wheeler & Co., proprietors of the St. Paul and Fulton Elevators, this city, have filed a bill in the Circuit Court against County Treasurer Wm. C. Seipp to restrain him from collecting a tax assessed against the grain stored in the elevators May 1. At that time there were in the St. Paul Elevator 598,993 bushels of grain. Against this a tax of \$5,000 was assessed by John A. Bell, which was subsequently raised by the Board of Equalization to \$6,000. The proprietors of the elevators claim that the grain stored in the elevator is the property of those holding warehouse receipts, and hence, being merely stored in the elevator, can not be assessed to the proprietors. After the levy of the assessment, the complainants called upon Mr. Bell, who, they say, admitted the impropriety of the charge, and agreed to strike the item from his books. He, however, neglected to do so, and an additional sum of \$330 was extended against them. The complainants say they can not reimburse themselves from the depositors if compelled to pay the tax, because they can not tell who are the owners of the shifting store of grain at any particular time. Similar allegations are made respecting the Fulton Elevator. Judge Tuley granted a

temporary injunction, restraining the treasurer from collecting the tax until arguments can be heard.

A bill of like character was filed at the same time against Treasurer Seipp by Armour, Dole & Co., proprietors of Elevator "E," at Oakley avenue and Sixteenth street, the grain in which is alleged to have been assessed \$40,000, which was equalized and extended \$50,400. An injunction was issued in this case as in the other.

Contract to Build Elevator.

Plaintiff and his partner contracted to erect an elevator within five months, to commence work within five days after notice by defendant's engineer of the completion by it of the foundation, with \$500 for each day gained, and \$500 forfeit for each day exceeding the five months, and brings this action for damages caused by delay through defendant not completing the foundation before giving notice. All proof tending to show this cause of action was excluded by the court on the ground that there was no covenant on the contract to have the foundation ready. Held, that the defendants were bound to prepare the foundation so as to have them in a condition to enable their contractors to prosecute their work to the utmost advantage and economy before giving the notice which set the time limited for its completion in motion. That the act of the contractor in commencing the work within five days after receipt of the notice in question did not constitute a waiver, as he did it under protest. That the fact that the assignment made to plaintiff of his partner's interest was not valid, did not constitute a bar, as he was entitled to his damages thereon. Plaintiff offered a judgment roll on an action brought by him against his partner to compel him to reform said assignment obtained after this action was brought. Held, competent. —*Mansfield vs. New York Cent. & H. Rd. Co. Court of Appeals of New York, April 13, 1886, 6 N. E. Rep., 586.*

Board of Trade Gambling Contracts.

Judge Bailey, of the Illinois Appellate Court, filed an opinion reversing and remanding the case of William Young & Co. against Samuel Coffman. This was an action of assumpsit brought by William Young & Co., commission merchants and members of the Chicago Board of Trade, to recover a balance of \$15,498.47 resulting from deals on behalf of Coffman on the Board of Trade extending from November, 1883, to July, 1883, aggregating \$371,000. At first Coffman was successful, but toward the last he lost heavily. William Young & Co. recovered a judgment in the court below for the full amount and interest, and the case was appealed for error in refusing an instruction offered by the defense. The defense was that the dealings were mere gambling transactions, and that while they were in the form of contracts for the future delivery of grain it was in reality intended by both parties that no delivery should take place, but that each transaction should be settled on the basis of the differences in the market price. Judge Bailey holds that while the evidence to establish an actual contract between the parties to deal in options was conflicting, still the court below erred in refusing an instruction to the effect that evidence was admissible to show an implied contract, or that the real intention of both parties was to deal in options only, and that that would show the deals to be gambling transactions, and void as against the provisions of the criminal code, section 130.

SUN SPOTS AND PRICES OF GRAINS.

Mr. Frederick Chambers, of Bombay, has recently published in *Nature* an elaborate comparison between the sun-spot variations and the fluctuations of Indian food grain prices. The result of his researches is the revelation of the remarkable fact that "amid all the apparently irregular fluctuations of the yearly prices there is in every one of the ten districts (of India) a periodical rise and fall of prices once every eleven years, corresponding to the regular variations which take place in the number of the sun spots during the same period." The lowest prices, it is found, occur in all the districts from three to five years after the years of maximum sun spots—that is to say, three years after at the southern stations, four or five years after at the northern. The highest prices occur from one to three years preceding the year of minimum sun spots.

One of the most important results of this investigation, Mr. Chambers says, is that it affords a certain amount of power to predict the variations of prices in the coming sun-spot cycle. Of course this will somewhat depend upon whether the sun-spot curve in any given period is regular, and whether the interval between maximum and minimum sun spots is of the average length. But as there is a regularly recurring eleven-year wave of prices, following the sun-spot wave, it seems possible to form some estimate of the general level of prices in the different years of the coming sun-spot cycle. It is interesting to note that upon Mr. Chambers' data it may with some reason be anticipated that the present period of low prices of grain, which followed the last sun-spot maximum (at the close of 1883), will not continue much longer, a rise of prices being due in the southern districts of India next year and in more northern districts from 1888 to 1900. If the theory holds good for India it will probably hold good, with slight modifications, for all the grain growing countries.

Fires, Casualties, Etc.

The elevator at Clontarf, Minn., has burned.

Benjamin Zehner, Sr., miller and grain dealer, Boswell, Ind., is dead.

The Minneapolis & Northern Elevator, at Evansville, Minn., burned on June 23.

Geo. P. Levy's grain warehouses at Weatherford, Tex., were demolished by a terrible storm on June 19.

The grain elevator at New Lenox, Ill., was fired, from a passing engine, on June 29, and was totally destroyed.

Horace Church, formerly a lumber and grain merchant of Barrington, Ill., died in Chicago, Ill., about a month ago.

At Chilton, Wis., Rossberg & Misener's elevator, containing 4,000 bushels of grain, has been destroyed by fire. Loss \$7,000; insured.

On the morning of July 13 the Ort Brewery, located near Brainerd, Minn., was destroyed by fire. Loss \$10,000; partially insured.

W. S. Hitchings' elevator, at Sutherland, Iowa, was struck by lightning on June 14, but the building was only slightly damaged.

Rowland Barden, of Minneapolis, Minn., once a prominent grain commission merchant, died on July 1 of typhoid fever, at the age of 59.

Frank H. Brown, a prominent grain merchant of Boston, Mass., has been arrested on a charge of forging bills of lading. He was held in \$30,000 bail.

The old Taylor brewery, at Albany, N. Y., was burned on June 21. Loss about \$150,000; insured for \$125,000. The building had been erected in 1851 at a cost of \$132,000.

Two little boys, sons of H. Wells and J. L. Heer, respectively, while playing about Ralph & Folger's grain elevator at Dana, Ind., slipped into a bin of moving corn and were smothered.

The E. S. Corser Elevator, at Carman, Minn., with a capacity of 50,000 bushels, fell on June 26, letting 28,000 bushels of wheat out on the ground. It had been weakened by the storm of June 10.

E. D. Tillson's oatmeal mills, at Tilsonburg, Ont., with adjoining elevator and contents, including 24,000 bushels of grain, were destroyed by fire on June 29. The total loss was estimated at \$28,000; insured for \$13,000.

J. Lehrkind's malt house, at Black Hawk, near Davenport, Iowa, operated by Zoller Bros., was totally consumed by fire on June 27, together with 1,400 bushels of barley and 6,000 bushels of malt. Loss \$13,000; insured for \$7,700.

A destructive fire destroyed the flour and grain warehouse at Philadelphia, Pa., occupied jointly by E. Riley & Co. and Walter Street, on June 28. The loss on the building was estimated at \$5,000, the loss on the stock being \$14,000.

George B. Van Fleet, a prominent hardware merchant of Wakeman, Ohio, was arrested on June 19 for giving a forged check for \$500 to a broker to meet a loss on a grain speculation. He operated under the name of George Baker, and signed that name to his checks.

George Manning, of Casselton, Dak., mysteriously disappeared from Duluth, Minn., on June 18, and it was feared he had committed suicide. He came to Duluth in January last, engaged in wheat speculations through the Lehigh Elevator Company, and lost his money when that firm failed.

Lucie and Adrian Cracy, sister and brother, the latter a commission merchant and member of the Produce, Maritime and Metal Exchanges at New York City, committed suicide on July 12, by shooting themselves. They were born in France, and came to this country with their parents in 1851.

On the night of June 28 the three-story-and-basement brick building at Nos. 129 and 131 South Clinton street, Chicago, Ill., occupied by Kulsely & Miller, the well known slate, tin and iron roofers, caught fire and was entirely burned out. The loss on stock and machinery was about \$10,000, and on the building \$4,000. The fire will not seriously interfere with the business of the firm, as the principal work is done in another building.

THE GRANGER EIGHT-HOUR SYSTEM.

Young man in search of a place—"Do you need any hands, Mr. Hayseed?"

Farmer Hayseed—"Need 'em? Certainly I do. Pull off your coat and pitch right in."

"How about the—er—eight-hour rule? Do you believe in that?"

"That's the rule on this farm, young man. You go to work at 4 in the morning and knock off at noon. Then you go on again at 1 o'clock and work till 9. Eight hours at a time is enough for me, I tell you."—*Philadelphia Call.*

Press Comment.

WAREHOUSE CHARGES FOR WHEAT.

Elevator charges have been recently so reduced at Chicago and Milwaukee as to greatly aid the grain trade during the period of navigation. It is, however, prospectively a failure, unless a still further change shall be made for the period during which navigation is closed.

At Minneapolis and Duluth a system of grain storage prevails different from that at Chicago. They charge about the same rate there for storage that is charged in Chicago for short periods while the lakes are open. But for the period while the lakes are closed, estimated there from Nov. 1 to May 1, the total storage charge is but 4 cents per bushel. At Chicago the total storage charge from Nov. 15 to April 15—the period of closed navigation as reckoned here—amounts to 7½ cents per bushel, the same rates prevailing that are charged during the summer. It is of course understood that the cash price of wheat while navigation is closed is governed by the cost of carrying it until May. It is easy to be seen, therefore, that after Nov. 1 Minneapolis and Duluth buyers can afford to pay 3½ cents a bushel more for wheat for May delivery than Chicago buyers can afford to pay. The problem of cheap warehouse charges in Chicago is not yet solved.—*Chicago Journal*.

THE MARINE VIEW OF STORAGE CHARGES.

Chicago and Milwaukee elevator people have seen fit to lower their charges for storage. This is probably due to the action taken by the Buffalo elevator people last year in announcing it as their purpose to receive grain for storage so that they could utilize some of the idle elevators at that port. It is well known that every new elevator built in Buffalo during a score of years has been acquired by the Buffalo elevator ring, and that every attempt to run a wild elevator has come to naught. During the ruling of low grain freights last season shippers, fearing an improvement in grain freights this season, filled up the Buffalo elevators. This had quite an effect on Chicago and Milwaukee storage business, and Milwaukee especially suffered much in consequence. Now, it does not matter much to the vessel owner what the rate of storage is if the elevator people will but deal squarely with him in the matter of weighing in and out of the vessels. While this stroke of conscience is on we hope they will adopt some honest convictions for the purpose of limiting the shortages which occur so frequently. Let everything go into the vessel that is charged on the bill of lading and give us honest draft out and deserve a future reward.—*Marine Record*.

ANTI-OPTION DECISION.

In the Appellate Court of this district yesterday a little stricter construction was given to the Anti-Options Gambling act of this state than it has received in the lower courts. The decisions of the circuit and other inferior courts have tended to a liberal understanding of Board of Trade contracts, and in favor of their validity unless actual proof that they were of a gambling nature were produced.

By the decision of the Appellate Court (William Young & Co. vs. Samuel Coffman) it was held that Board of Trade contracts, even if they appeared to be for the actual sale and purchase of grain, were to be construed according to the intention of the parties, and that if differences only were paid, the contract became a gambling contract. It was intimated that the character of a contract, as a gambling contract or otherwise, might be largely established by implication and circumstances growing out of the settlement of a succession of deals under it.

This decision again opens the door to strenuous pleas of "the baby act," which had been generally ineffectual in setting aside Board of Trade contracts in the lower courts.—*Chicago Journal*.

GRAIN STORAGE AND DELIVERY.

We can say, as did Galileo of old, that "the world moves," and moves fast, too, nowadays. It is very plain if America is to continue to hold her position in Europe as the grain-producing country of the world, that every point of advantage must be seized, howsoever little it may seem, as in a boat race, when the rower gives careful attention to every little detail about his oars, seat or row-lock.

In wheat matters, just at present, the world moves in the direction of freeing the grain from all unnecessary burdens while in transit. Among the heaviest of these are the elevator charges for storage, and especially for mere delivery. The average cost of transportation by lake and canal from Chicago to the seaboard is 8 cents per bushel, while the elevator charges, as shown by the Milwaukee Chamber of Commerce, are per annum in Milwaukee, Chicago, St. Louis and Baltimore, 15 cents per bushel as compared with 10 cents per bushel at Detroit, Toledo and Duluth, 9½ cents at New York, 8 cents at Buffalo and 7 cents at Minneapolis. The Chamber very properly asks why Milwaukee should pay more than twice the Minneapolis rate.

But the matter goes deeper than mere differences between cities. It is a question whether the railroads shall not themselves assume this charge. They build freight houses for the proper and careful delivery of other merchandise, why should not the same principle apply to grain? Much Chicago grain is bought and sold on

"track delivery" where the charge is but \$2 per car, but this is only a makeshift, and can not in the nature of things be anything but temporary. The railway manager replies that the erection and maintenance of costly elevators, free of charge to shippers, is no part of his business or agreement, and was not considered in the fixing of rates; nevertheless, the logic of events is stronger than the arguments of either manager or shipper. The old rates of freight to Chicago from Dakota, Kansas and the grain country generally, are doomed. The railways themselves, by their hasty building of lines into each other's territory, would soon bring this about, and when we take a broad view of the whole matter, noting the decline in prices throughout the world and the certainty of a corresponding fall in profits of transportation, we see that this cheapening of grain carriage can not long be delayed.—*American Grocer*.

AN ANNOYING PEST.

The English sparrow is abroad and complaints of its misdoings come to us from all over the country. The sparrow is certainly the most destructive of birds and farmers have good reasons to dislike it. The fact that it is increasing in numbers is not a pleasant thing to contemplate and the necessity for a law placing a premium upon its destruction becomes greater every day. The Chambersburg *Opinion* says that during the winter a number of these obnoxious birds got in the barn of Mr. Jacob Siegrist, of Greene township, and ate about ten bushels of wheat. They are worse than the rats in this regard. They will eat wheat in the fields from shocks or from the stalk, and they are very injurious to the garden, where they scratch around. No vegetable seems safe from their attacks. Red beets, peas, cabbage and other eatables are all as one to these annoying pests. They are as dangerous to a corn-field as locusts, and whenever corn gets fairly started they eat off part of the tender ears. In addition to all this, they destroy the nests and eggs of other birds and drive more useful members of the feathered tribe away. Another instance of their voracious appetites is shown by the fact that many farmers can not feed their chickens without these birds appearing to pick up the food as fast as it dropped. The sparrow ought to go.

SILVER AND INDIA WHEAT.

Many different theories have been advanced as to the cause of the depression in the value of silver, one of which is from a prominent banker of New York City, who is credited with saying that a poor grain crop in India this year has had much to do with the low price of silver, inasmuch as England in her trade with India pays the balance against her in silver; but as India wheat was scarce, the balance of trade this year was in favor of England, consequently there was no demand for silver to convert into Indian rupees. It is somewhat refreshing to learn of a poor wheat crop in India the past year, and of any special decrease in the India wheat trade with England. By the same reasoning, with lower prices for silver there should have been, at least in India, better prices for wheat, as, according to the authority named, there was less India wheat to purchase and more and cheaper silver to pay for it. But the records fail to show that India's surplus has been light, or that her producers are receiving more or as much silver for the same quantity of wheat than when silver bullion had a much higher rating. Exports of wheat from Bombay and Kurrachee, during the first quarter of the current year, were 3,319,000 hundredweight—equivalent to over 2,000 short tons per day. This is certainly not at all indicative of a light movement or a poor crop. While there are almost numberless opinions as to the cause for the depression in silver, that which attributes it largely to overproduction seems the most consistent with the facts. The low price of wheat is due to increased supplies, and there is no reason to suppose that silver is exempt from the same conditions. That there has been an extraordinary increase in the output of silver during the past years, is well known. This, taken in connection with a reduced gold product and the demonetization of silver by Germany, seems sufficient to account for the unsatisfactory condition of the silver market, without seeking for more obscure reasons.—*San Francisco Grocer*.

ELEVATOR RATES AND THE GRAIN TRADE.

Since 1880 the quantity of grain handled on track (in Chicago) without going into store has increased from 20 per cent. to 57 per cent. for the twelve months ending with last October. To arrest this damaging course of business to their own profit the elevators were compelled to make the reduction which they have offered to the trade with an unnecessary pretense of magnanimity. The carrier of grain is benefited to the extent of ½ cent per bushel by the changes made in the elevator's charges alone, and no more. The elevator owners are not responsible for the cutting out on the charges for trimming and switching cars. It is, therefore, reasonable to believe that their interests and the city's interests, as a grain market, were not consulted in any way whatever. Chicago's position as the grain clearing-house of the world makes the presence of the actual grain a necessity, and it is because of the mighty influence of the speculative element that the extortionate storage rates have been so long endured. Elsewhere it is probable that the average rates of storage per bushel will soon be reduced to 9½ cents per annum, or less, as the result of recent investigation by official committees. This is the present rate at Detroit, Toledo, Duluth and New York, while Milwaukee is to offer reductions in

September, and Buffalo's rate is 8 cents and Minneapolis' 7 cents per annum. Chicago people who are best able to judge of the matter affirm that the annual rate for storage ought in justice to be reduced to 7½ cents per bushel in this city. Grain is unquestionably better taken care of here than at other points and is seldom or never posted as out of condition. Neither are there any incidental charges to be paid as is the case elsewhere. But this does not acquit the elevator people of the charge of rapacity and public injustice.

With the annual rate for the storage of a bushel of grain fixed at 7½ cents it is very doubtful if the elevator stockholders would then be willing to have their munificent dividends publicly declared. The next state legislature will have this matter before it for consideration unless some previous action is taken to relieve the public of the galling burden it has carried so long. The question now arises, Can the business men who control the elevator companies afford to await the result of the people's appeal to the Legislature?—*Chicago Tribune*.

ITEMS FROM ABROAD

The grain firm of M. Kabalkin, at Liban, Russia, has failed.

A Produce Exchange was opened at Liverpool, Eng., on June 8, with W. P. Sinclair as president.

The official report on the prospects of the crops in Prussia is highly satisfactory, especially as regards rye and wheat.

The French Chamber of Deputies, notwithstanding the objections of the government, has decided, by a vote of 302 to 227, in favor of a sur-tax on cereals.

The close of the cereal year finds Europe, and notably the United Kingdom, with smaller stocks of wheat and of flour on hand than were held on July 1, 1885.

The quantity of barley imported into the United Kingdom during the week ending June 26 was 157,232 hundredweight, against 98,129 hundredweight the previous week.

The imports of corn into the United Kingdom for the week ending June 26 amounted to 741,930 hundredweight, against 628,993 hundredweight in the previous week.

For the week ending June 26 the combined imports of wheat and flour into the United Kingdom were 543,006 quarters (flour reduced to wheat), against 389,620 quarters the previous week.

An authority states that the total shipments of wheat from India from Jan. 1 to June 19, 1886, were 19,264,009 bushels, including 7,980,000 bushels to Great Britain and 11,284,000 bushels to the continent.

La France of June 4, a French daily, claims that wheat at that time could be bought cheaper in the United States than wood in France, the price of the latter article in that country being one cent per pound.

The Millers' Gazette, of London, Eng., says that from information received the Indian shipments of wheat will probably fall off for a time, as the contracts which caused the recent increase in shipmen's have been fulfilled.

The gross imports of wheat into the United Kingdom from Aug. 29, 1885, to June 19, 1886, were 9,036,430 quarters, against 10,239,401 quarters during the same period of last year. The imports of flour (as wheat) aggregated 3,256,431 quarters, against 4,280,031 quarters the previous year. The total sales of English wheat in the country during the period indicated were 7,662,446 quarters this year, against 7,479,525 quarters the same period last year.

The quantity of wheat on passage from India to the United Kingdom was 7,080,000 bushels June 8. The steamers carrying this large quantity make the voyage in about sixty days, and the average quantity to be delivered would be about 118,000 bushels per day. The United States is shipping about 300,000 bushels per day, showing that we are not yet quite crowded out of the trade. On the same date there was only 640,000 bushels of wheat in transit from Australia to England, against over 8,000,000 bushels in May, 1885. Three ships were chartered June 17 in San Francisco to load wheat for Australia.

The Board of Directors of the Union Elevator Co., at Council Bluffs, Iowa, met at Chicago, Ill., the other day, when the following officers were elected: President, S. R. Callaway; Vice-President, Marvin Hughtitt; Secretary and Treasurer, George F. Wright, of Council Bluffs, Assistant Secretary and Treasurer, George W. Hall, of Omaha.

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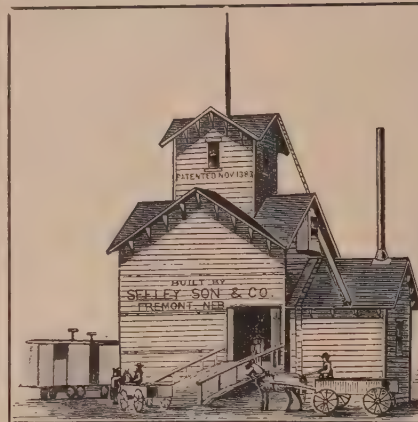
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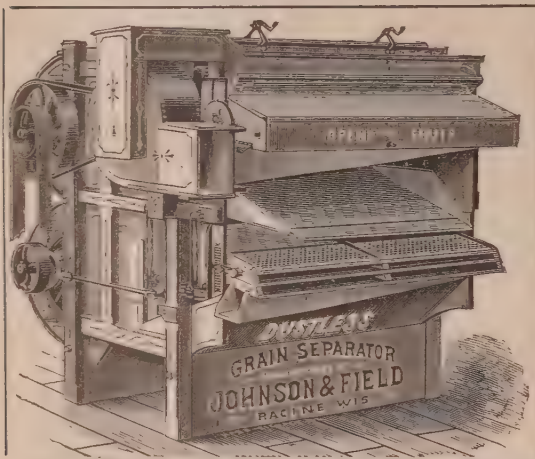
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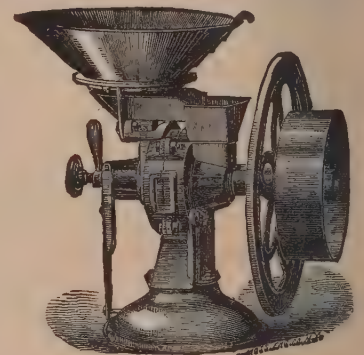


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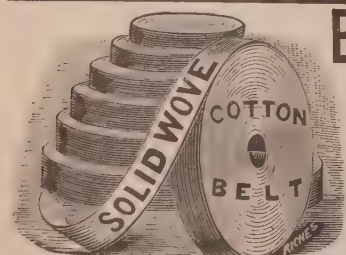
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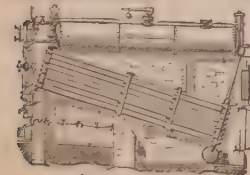
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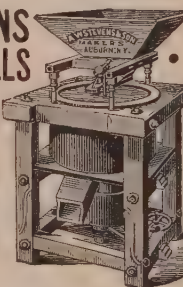
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THREE-SIEVE DUSTLESS ELEVATOR SEPARATOR.

THREE-SIEVE DUSTLESS WAREHOUSE SEPARATOR.

VICTOR CORN SHELLER.

IMPROVED DOUBLE-SCREEN DUSTLESS CORN CLEANER, with SHAKE-FEED BOTTOM.

THE ADVANCE COMBINED BRUSH AND ROD BEATER BARLEY AND GRAIN SCOURER.

Also Manufacturers of the following Standard Milling Machines:

The Best Scourer for Barley in use.

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EUREKA FLOUR PACKER, with Barnard's Improvement for Raising Platform.

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LITTLE VICTOR CORN SHELLER.

—ALSO THE—

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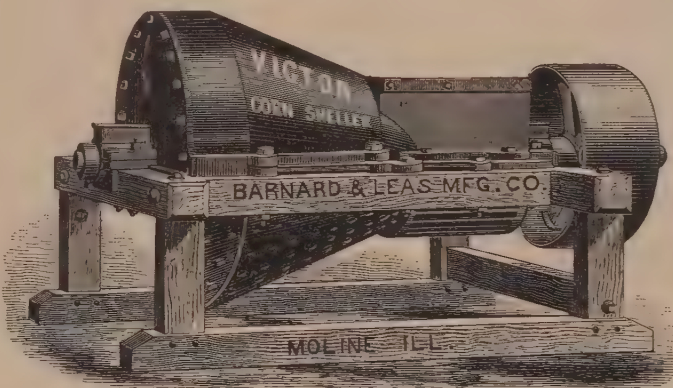
MESSRS. BARNARD & LEAS, MOLINE, ILL. — GENTLEMEN: Inclosed please find draft for amount for Warehouse Separator. I must say I am well pleased with the Separator, and will take pleasure in recommending it to others, for I am sure it cannot fail to give the best of satisfaction if purchasers will only follow instructions in setting it up, which is a very easy matter. I superintended the setting up of mine, and it works splendidly.

Yours truly,

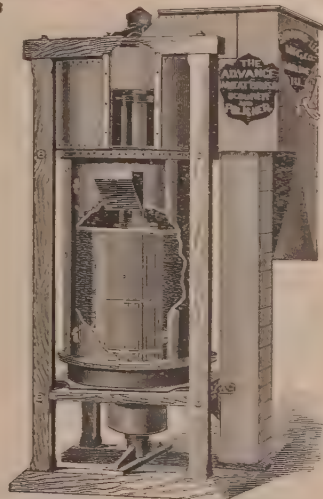
J. M. DAVIDSON.



Separator.



Victor Corn Sheller.



Advance Combined Brush and Rod Beater Barley Scourer.

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and Price List

—TO— THE BARNARD & LEAS MFG. CO., Moline, Ill.

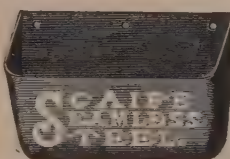
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Get Prices

—FROM—
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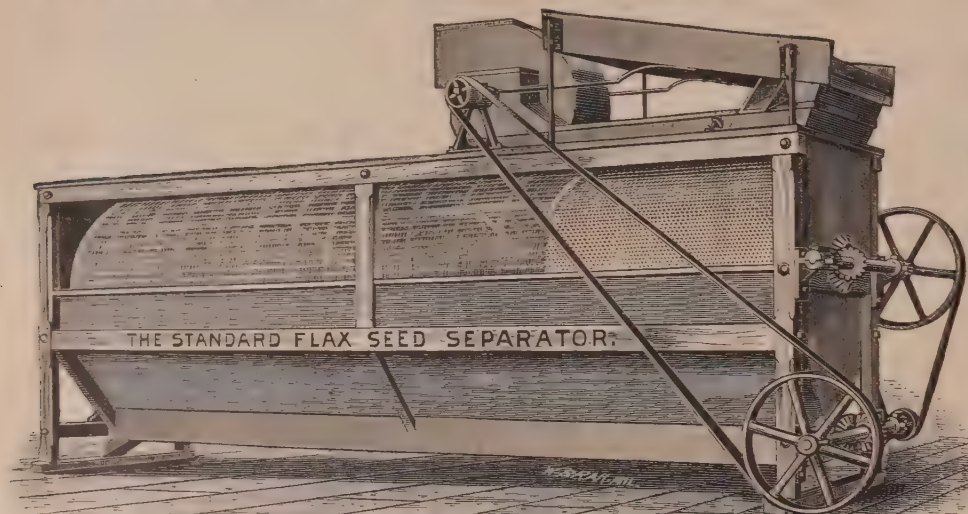


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STEEL
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Secure Catalogue for 1886

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**FRED.
GROTENRATH,**
PRACTICAL
MILLWRIGHT,
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OF THE
**Standard
Flax Seed
Separator.**
Light-Running,
Large Capacity,
AND IN
CLEANING
It has no equal.

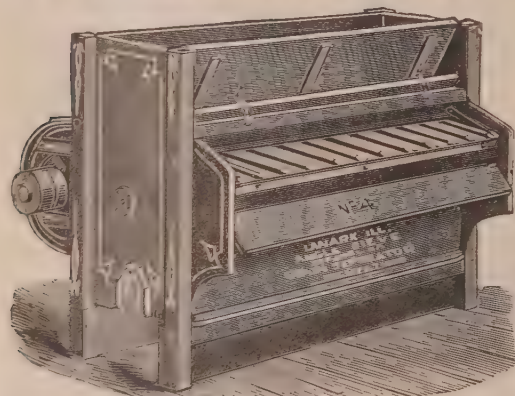
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THE ANGLE SIEVE GRAIN SEPARATOR

(D. T. Weed and H. A. Webber's Celebrated Patent.)

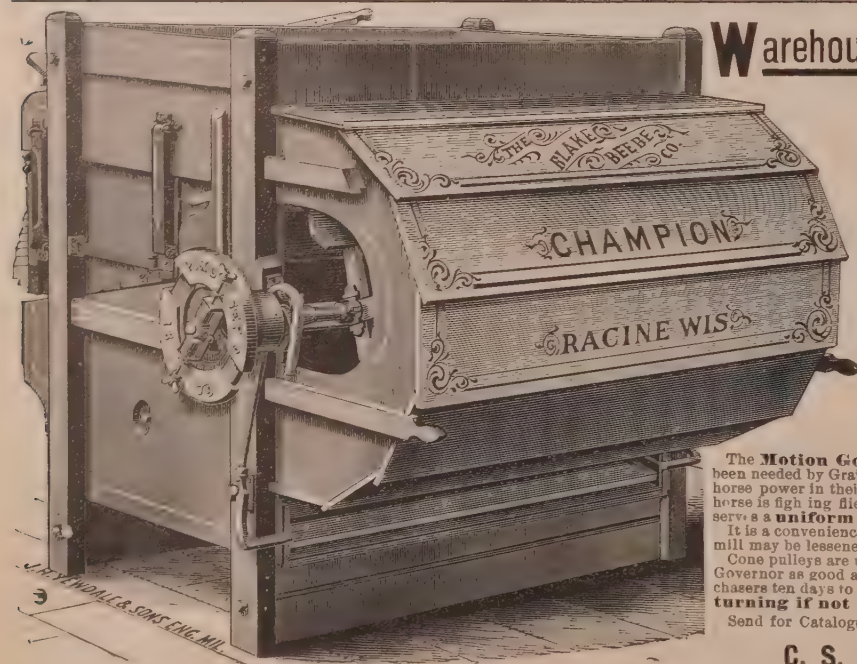
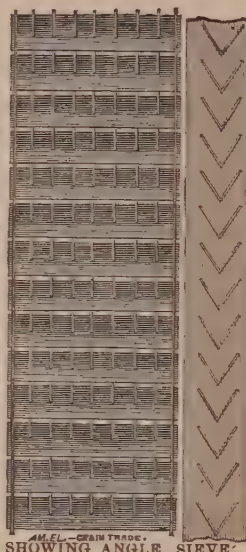
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Everybody is astonished to see the work it does. We challenge competition, for general cleaning purposes. We can and will separate oats and wheat raised together, the first time through the Separator, and make it fit for market, and not run any wheat over in the oats. No other Separator can help running wheat over, where the suction or blast is depended on to make the separation, which we claim is not the correct principle of separation. The peculiar construction of the sieve, and the motion of it, do the work. We can take oats out of barley just as well, though not quite so fast. No other Separator attempts to do this. We can also clean buckwheat, flax, rice or any other small seeds that any other separator will handle.

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PATENTEES, {



Warehouse Fanning Mills.

Cut of No. 6 Mill with Motion Governor.

—CAPACITY—
600 BUSHEL
PER HOUR.

—WE MAKE—
Seven Different Sizes

—FOR—
**Warehouses
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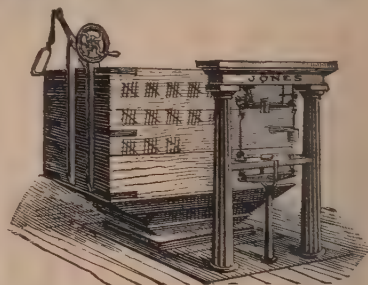
More of them in actual and satisfactory use than any other kind.

The Motion Governor is something that has long been needed by Grain men, particularly by those who use horse power in their elevators, for it matters not if the horse is high in flies, jumps or runs, this Governor preserves a uniform and steady speed. It is a convenience with steam power, as the speed of the mill may be lessened or accelerated by it in a moment. Cone pulleys are unnecessary with it. We guarantee this Governor as good as represented and we will allow purchasers ten days to test it, with the privilege of returning if not equal to the guarantee.

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With this Spout you can load a car without shoveling, and it is the best Spout for general use in the market. Will work well in any kind of an Elevator, and is designed expressly for loading where there is but little fall from bin.

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ENGINES**
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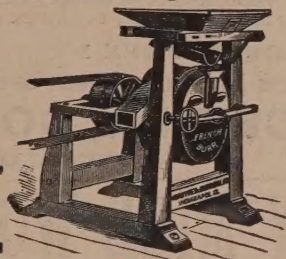
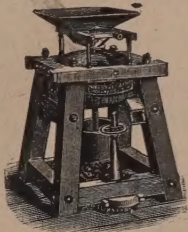
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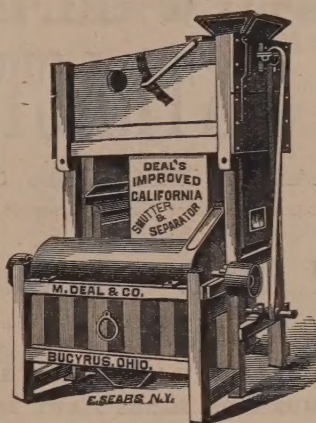
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Unequaled for Rapidity and Thoroughness. The Best, Most Rapid and Satisfactory Dryer extant! **GRAIN DRIED** at rate of 1,000 bushels per hour, the automatic arrangements and low temperature insuring evenness and uniformity. Besides drying evenly, the very dry air peculiar to this machine removes any slight odor from sweat or heat, and puts the grain in condition to grade. The air used has all the various degrees of low temperature necessary, there is no Parch, Shriv, Discoloration or other evidence of artificial drying. Weevil and Midge exterminated. Grain brought to Grade at trifling cost. It is beyond question the **Champion Grain Dryer**. This Dryer is in successful operation in the West, and produces its own best evidence that it does easily all that is here claimed, to the entire satisfaction of its patrons. ALL MACHINES ABSOLUTELY AGAINST FIRE. Information furnished promptly upon application.

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Cheap, Simple, is Absolutely Secure

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Unlike other Sample Envelopes, this has its Loop or Fastening A, secured to Envelope, and is in no way likely to become lost, broken or bent out of shape; but is always ready for use. It is the Cheapest and Most Complete Package for sending samples on the market.

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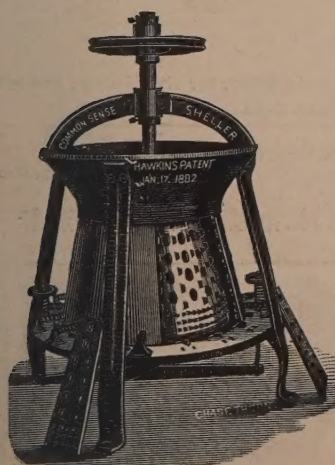
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The only Self-Adjusting Automatic Sheller in the market. It possesses more advantages than any other known machine; takes less power to operate, and adjusts itself to the size of Ear Corn. Will shell more corn, and that too without splitting the cob. Leaves little or no corn on the cob; grinds and breaks less of the kernels, is less liable to be broken (by having some hard substance pass through the sheller) on account of the flexibility of segments and safety pins in plate—which are of wood and can easily be replaced. Works right or left as may be required.

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EVERY SHEET STAMPED WITH BRAND
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We guarantee the material of the "CAMARET" to be the best Martin-Siemens Steel (exactly the same material as the "Gilbertson's Old Method") while many of the cheaper plates offered in competition with the "CAMARET" are made of Bessemer Steel, which can be bought at a less price, hence is of inferior quality.

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The following is our specific guarantee of all the plates purchased from us under the brand "CAMARET":

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4. That each box contains 112 sheets of uniform gauge, and that each sheet is stamped with brand and gauge.
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We take the entire product of the Mill in this Brand of Roofing Plate; and the **Works are under Contract with us** to keep up the Quality of Goods as Guaranteed by us, and agree not to furnish the "CAMARET" Roofing Plate to anyone else, either under this Brand or a Private Brand.

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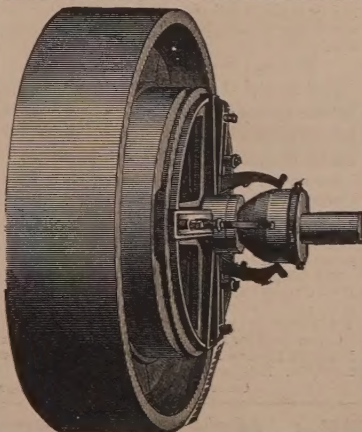
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You can start a load with this Clutch, at any speed,
with ease and safety.

Also Split Pulleys, Dead Pulleys
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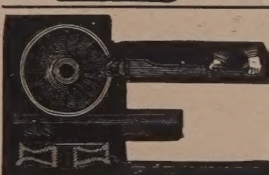
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With it One Man can Move a Loaded Car.

WEIGHT, including Handle, 15 lbs.

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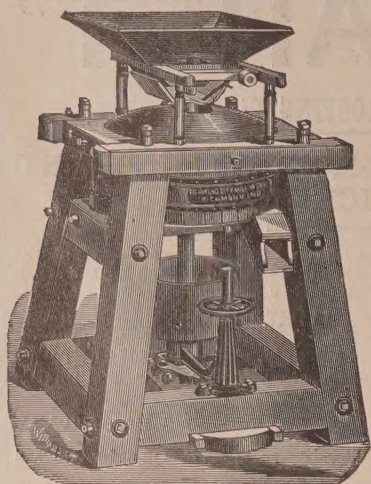
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PORTABLE MILLS

Of Every Description,

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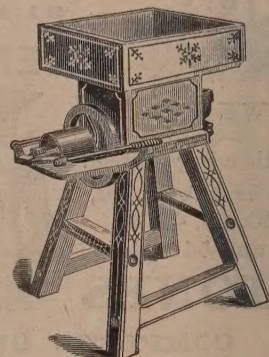
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We have seen this machine in operation, and are highly pleased with the results. It not only dries the grain, but cleans, removes the must and greatly improves its appearance. We consider the machine a valuable one and are glad to recommend it to any one interested."

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Soon after every harvest many millions of bushels of damaged wheat are forced on the market at great sacrifice, which can be put in good condition by this machine, at a cost of **Less than One Cent per bushel**. To be prepared to handle their wheat at large profit, you should order a drier at once.

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The Lotz Patent Grain Shoveling Machine

FOR UNLOADING CARS

Is without clutches and driven by paper friction. It works automatic and noiseless, and the length of pull of hoist rope can be instantly adjusted. A big saving in ropes, scoops, lubricants and repairs over all other Shoveling Machines, so much so that the entire cost of a machine will be saved by its more economical operation within a few years. **Eleven Double Machines have been in practical operation in Rock Island Elevator "A" Chicago, since 1882.**

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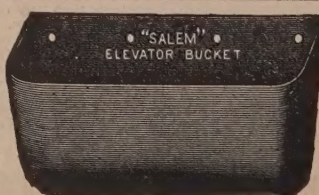
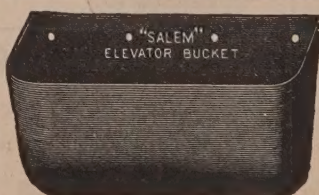
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POP CORN.
Warehouses { 115, 117 & 119 Kinzie St. OFFICE, 115 KINZIE ST.,
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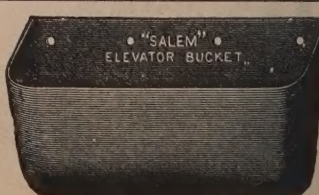
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SALEM, - OHIO.

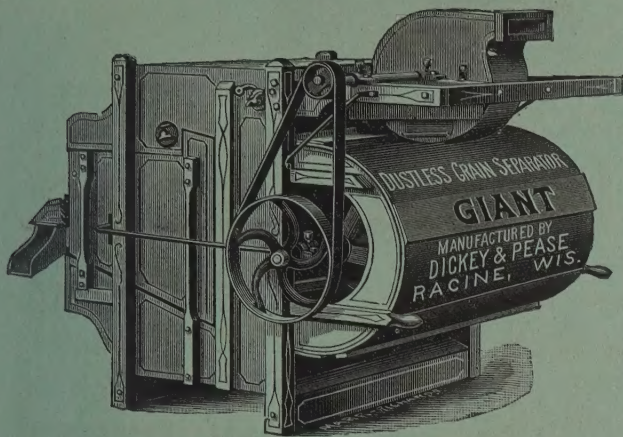


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"GIANT" DUSTLESS GRAIN & FLAX SEPARATOR!



We claim for the "Giant" **Superiority over all other Separators** for the following strong reasons:

1st.—It is simple in its construction, **Strong and Durable**. Any one competent to run a fanning mill can operate the "Giant."

2d.—The height from the floor to the top of the receiving hopper is but 4 feet 3 inches, hence it will accommodate spouts from different points the same as a fanning mill, that is **without being obliged to move the machine**.

3d.—The cost is not much over one-half that of

any other Separator that will do the same work

4th.—This machine will clean and screen better and faster than any other Separator made, sizes being equal. **Every Separator GUARANTEED to give Satisfaction.**

These Separators are also made with the "side shake" for the special purpose of cleaning Flax Seed.

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Established 1850. **SINKER, DAVIS & CO.** Capital, \$200,000

MANUFACTURERS AND CONTRACTORS ELEVATOR AND FLOUR MILL MACHINERY.

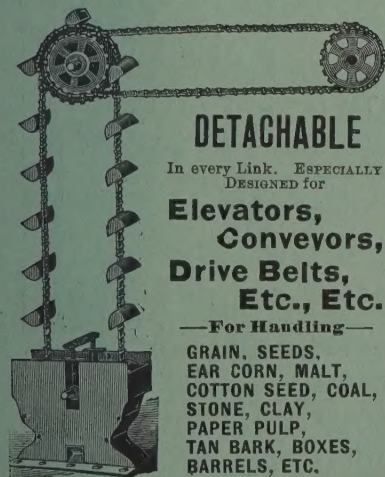
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In every Link. Especially Designed for

Elevators, Conveyors, Drive Belts, Etc., Etc.

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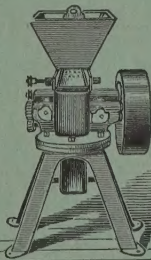
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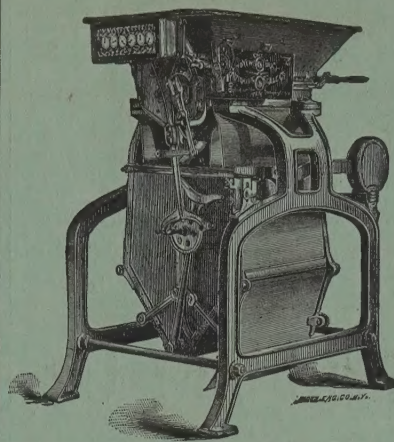
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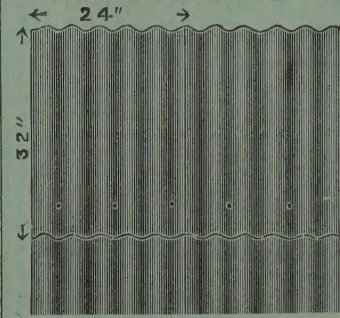
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